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APRIL, 1948

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AMERICAN MANAGEMENT ASSOCIATION

What Can You Do with an Hour of Labor?

—The New Challenge to Production Executives

SPRING PRODUCTION CONFERENCE

THE PALMER HOUSE, CHICAGO • MAY 13-14, 1948

Labor has become increasingly less of a factor in competition. Within industries rates are about the same. The question is—What can you do with an hour of labor? This is a management problem. It means that labor must be given better tools, better equipment, better methods, better training, and that it must be selected with greater care.

This is the essence of a recently completed production management survey which the AMA made in preparation for its Spring Production Conference. Here is the new frontier of competition.

New standards of costs, keener competition, reduction of volume in some instances—all these factors are combining to present management with a new challenge. Representatives of 800 companies throughout the United States will attend this meeting to discuss this current production problem.

To non-members who read this announcement, AMA regrets to say that the Conference will be restricted to members of the Association. The decision to follow this policy in connection with all AMA conferences has been reached by the Association's Board of Directors in view of the fact that many of the Association's conferences have been overcrowded by the attendance of non-members.

Among the Conference Topics:

- THE ECONOMIC OUTLOOK
- METHODS AND TECHNOLOGICAL CHANGE
- ORGANIZED COST CONTROL
- INDUSTRIAL MOBILIZATION
- GETTING THE MOST OUT OF QUALITY CONTROL
- FLEXIBLE BUDGETING
- SELECTION AND TRAINING OF SUPERVISORS AND EXECUTIVES
- USING THE RESULTS OF EMPLOYEE OPINION POLLS
- TECHNIQUES OF COMMITTEE MANAGEMENT

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AMERICAN MANAGEMENT ASSOCIATION
330 WEST 42nd STREET • NEW YORK 18, N. Y.

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the MANAGEMENT REVIEW

Volume XXXVII No. 4

APRIL, 1948

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GENERAL MANAGEMENT...

Commodity Prices vs. Consumer Demand

CERTAINLY the most important economic event of the past 12 months was the commodity break in early February. The dramatic fall, which reduced most grain prices by 20 per cent or more, turned many business men's thoughts from worries over inflation to concern about recession. And the thought uppermost in everyone's mind was: "Does this spell the end of the postwar era of expansion?"

When commodities tumbled, stocks went through their worst sessions in months, more from a nervous apprehension over the future than from a feeling of surprise over developments. Because commodity declines in the past have often been associated with business declines, there was a natural tendency to draw the conclusion that this time would be no exception to the rule.

So this is a good time for business to pause and consider the outlook for the more distant future. Long-term estimates must always contain a large element of guesswork and must always be subject to revision. But the basic question of whether the next three to five years will see contraction or expansion is important because it enters into decisions which must be made here and now. On what can we base our planning ahead for the longer run?

Probably the most important single factor in the economic picture of the future is the expanded role of the government in sustaining purchasing power. With its present commitments on the national debt, with its manifold social service agencies, with its vast veteran program, and with its network of corporations and administrations, the government cannot cut its expenditures below a level of at least some $30 billion a year. This includes $10 billion for the Armed Services but does not take into consideration our expenditures for European aid. Not only is it apparent that the Government is the most powerful force in sustaining the over-all level of business, but, fortunately for business, its expenditures are not liable to decrease if economic conditions worsen; in fact, just the reverse is true. Certainly the economic implications of such a stabilizing source of income should be reassuring to those who regard the future with uncertainty.

But many business men are worried about the ability of consumer purchasing power to absorb our enormously enlarged volume of industrial output. By the end of this year, we shall be turning out half again as many goods as we were in 1939; obviously this requires a mass market half again as large as before the war. Those who find it hard to believe that incomes can keep pace with production might profit from a study by Arno H. Johnson, of the J. Walter Thompson Company. Mr. Johnson points out in his study that in 1948:

"The surplus income of individuals available for discretionary spending or saving will be about three-and-a-half times the highest prewar levels. This is after taking full account of the higher tax level and allowing for a 60 per cent increase since 1940 in consumer prices applicable to basic living costs."

For publishers' addresses or information regarding articles or books, apply to AMA headquarters.

Here are the figures:

AVERAGE U. S. FAMILY INCOME

	1940	1948
TOTAL INCOME	$2,240	$5,174
Food, clothing, housing, and household operation	1,408	2,253
Taxes	74	543
Surplus for discretionary spending	758	2,378

The amount available for *discretionary* spending—and this does not take into account the huge backlog of savings —is more than the *entire* family income of 1940.

This tremendous consumer market must also be viewed in the light of the still very low ratio of consumer debt to total national income and the still unrealized dynamic potential of our growth in population. While it is true that many pipelines are being filled in soft goods and in consumer durables, there is an enormous vacuum in housing and automobiles which alone could provide economic stimulation for another three years at least.

Many business men are aware that consumer purchasing power is essentially a passive factor in our economy, that it depends for its buoyancy on a high rate of activity in the investment sphere of building new plant and equipment. A high rate of government expenditure and a large backlog of savings and demand may cushion consumer demand for the time being, but in the long run it is the level of activity in business expansion that counts. What is the outlook here?

The McGraw-Hill Publishing Company has recently completed a survey of just this question. They find that at the end of 1947 only 64 per cent of the private postwar expansion of plant and equipment had been completed and that business planned to spend almost as much in 1948 as in the record year just past. Furthermore, the reporting executives indicated that they intended to go ahead with their plans even if business fell off by as much as 20 per cent.

By the beginning of 1949 the McGraw-Hill study finds that postwar expansion will be 85 per cent complete. But the President's Council of Economic Advisors, looking still further ahead, sees a vast field for private investment stretching well into the future.

The council sees a need for big boosts in the output of our steel, electrical power, and other basic industries. Our electrical power reserve is only 1 per cent of current output instead of the normal 15 per cent. And this is not all: The council stresses that within 10 years 45 per cent of our existing highways will have to be rebuilt, not to mention building new roads that are badly needed. Our air and rail transport facilities must also be expanded and renovated. In addition to the huge demand for housing, a $75 billion opportunity for investment exists in city improvements and developments. Agricultural methods must be overhauled; our educational and health levels must be lifted.

The long-term outlook must, of necessity, be uncertain. But there is no reason, in the light of the potential opportunities we face, to regard the future with resigned pessimism. The short-run poses questions of a different nature. Our commodity crack cannot help but accelerate the gradual shift to a buyers' market which we have been experiencing in one line after another. Its effects will probably not be felt at once. It is true that farm incomes may be cut by as much as $2.5 billion, but consumer purchasing power will benefit in exchange. Inventory losses will be suffered, but to a large degree they have been anticipated. Procter & Gamble, for example, have a reserve of $42.5

million against inventory loss which should cushion them against the fall we have experienced. And the government agricultural price floors will prevent a complete demoralization of the food commodity markets.

The effects of the crack will most likely show up in the intangible factor of buying attitudes. In a falling market no one buys ahead. We have accumulated total national inventories of $40 billion; we can live on these for quite a while. And living off inventories can mean a very definite slackening in the tempo of business and a perceptible rise in unemployment. In addition, tightened credit and shrinking working capital are likely to bring trouble to smaller business, while the filling of some consumer and industrial pipelines will affect certain industries.

Yet, unless we have a panic psychology, there is no reason to expect a *sharp* letdown in business. Continued government spending, still large business commitments for plant and equipment, a backlog of consumer wants and savings, and a fortunate lack of inflation in security prices should make our economic adjustment comparatively painless. And if the Council of Economic Advisors is correct in its long-term assumptions, there is no reason to fear that our recession will be endlessly prolonged, or that it will turn into a full-scale depression.

BY ROBERT L. HEILBRONER. *American Business,* March, 1948, p. 10:3.

If Industry Ever Had to Go Underground

MOST people agree that industry would not go underground if this country were dragged into another war. For one thing, the cost would be prohibitive. It has been estimated at $500,000,000,000.

For all that, it might be necessary to put a few plants underground. And because that possibility does exist, management should know something about the problems that would be encountered.

Fortunately there is plenty of evidence. Underground plants got a tryout in World War II. By V-E Day, Germany had 143. Japan operated a number. Britain experimented with them. So did Sweden. In fact, as shown later in this article, a Swedish underground plant is still operating today.

What, then, are the facts? An examination of available experience brings to light the following:

1. With few exceptions, Germany, Japan, and Italy moved factories underground on the basis of expediency, then enlarged existing caves, mines, quarries, and tunnels. There was almost no advance planning or special construction to fit specific requirements and meet peculiar conditions of underground operation.

2. Many desirable plant facilities had to be omitted because of wartime shortages in manpower, materials, and equipment. Thus experience with these underground plants leaves us unsolved problems in air conditioning, gas-proofing, dust control, and noise absorption.

3. In general, the most desirable underground sites were those found in

the sides of hills or mountains. Such locations had advantages in dryness and relative freedom from trouble with groundwater, whereas those in foothills and valleys were usually wet. They also made installation of sewage systems easier, afforded more adequate ventilation, and usually provided better entrances and exits.

4. Many German and Japanese underground plants were excessively damp. This meant constant discomfort and illness among workers, rapid corrosion and deterioration of equipment.

5. Information on German experience emphasizes the need to provide for underground location of supporting facilities, such as power plants, transportation systems, and storage space. The fact that machines were underground didn't help when Allied bombing interrupted the supply of fuel, power, or materials, and blocked shipments.

Electric power was generally furnished the German plants by existing local facilities and transformed to the desired voltage by underground transformer stations. However, three underground generating stations in the Clausthal grid supplied power to mines and towns in that area.

German experience showed that transmission lines, carrying energy over long distances at high voltage, can be restored to service quickly; but transformers needed to step the voltage down cannot be easily or quickly repaired. Also demonstrated is the need for ample storage space for raw materials and finished products, to enable a plant to operate for at least two weeks without recourse to surface transportation.

6. All study of underground plant operations to date underlines the need for special planning and engineering to insure adequate provision for worker welfare, efficient production, and proper maintenance.

Some plants have operated successfully underground. Witness the Bolinder-Munktell Company's cave plant at Eskilstuna, a town of less than 50,000 population, 100 miles from Stockholm. Built for wartime production of aircraft engines, this plant now produces diesel engines, aircraft engines, tractors, agricultural and sawmill machinery, and machine tools.

Transportation facilities, except for workers, are of comparatively small importance, because finished goods and raw materials can be carried to and from the plant by truck. Railroad lines supply the area. In the unlikely event of all these being cut, water transport is conveniently close by.

Hewn from outcropping rock, this plant was constructed with a general floor level about that of the surrounding country. Parallel bays, 50x100 feet, are connected by transverse passageways. No roof or wall bracing is required. Periodic inspections are made to discover and remove loose rock.

There was no need to waterproof these rock tunnels. Any seepage is carried off by conditioned air kept slightly drier than normal. Humidity can be kept so low that nothing rusts. No rock is visible in the main shops, which are enclosed in an inner shell of composition board painted white.

Power supply is from the national utility network. A reserve battery lighting system was installed to provide illumination in case of power failure.

Cooling, rather than heating, is nec-

essary most of the year. In departments where there is exceptional heat, such as the hardening room, air is cooled by a local system. Special arrangements likewise were made for confining dust to the place of origin.

The composition board shell dampens noise effectively. Storage areas are in the rock close to the shops. No information is available about these areas, the size of the plant, or the number of workers. This number is estimated at 500.

Before the experience of working underground, workers were decidedly skeptical. Actually, however, turnover of employees has been no greater than in a normal plant. Less than 1 per cent of those leaving do so because the shop is underground.

Workers' health has, if anything, improved underground. The dry, constant-temperature atmosphere seems to suit people. No impairment of efficiency has been noted. Such aids as sun-lamp treatment or special rest periods have not been found necessary. Productivity is at least as high as, if not higher than, that at this particular company's surface plant.

Bolinder-Munktell also has surface plants producing the same products and can therefore easily compare costs. The company knows, for instance, that plant costs run about 15 per cent higher underground, but maintenance costs are lower.

Here then is evidence of both satisfactory and unsatisfactory adaptation of subsurface conditions to manufacturing requirements. However, the experience of other nations supplies but a few of the answers to gigantic and costly possibility of putting America's war potential underground.

Before embarking on such a venture, American management will have to decide these issues:

1. What provisions can be made for the innumerable services needed to support such industry?

2. How will labor supply, transportation facilities, and housing influence location and operation of underground plants?

3. Can plants and personnel be protected from radioactivity?

4. Would industrialists volunteer to locate plants underground in peacetime?

5. Would they be willing to invest in such plants?

6. What shall be the role of government in preparing an underground industry?

Factory Management and Maintenance, March, 1948, p. 97:3.

Is the Workweek Too Short?

TO increase production of sorely needed products, should the workweek be increased from 40 to 44, 45, or more hours before overtime rates must be paid? To get industry's viewpoint on this question, *Mill & Factory* queried all types and sizes of manufacturing concerns.

"It is not the number of hours worked that counts," says one company respondent. "The problem is to get more production, or a fair day's production, within the 40-hour week."

Production workers employed by 27 per cent of the respondents to the survey now average over 40 but not over 45 hours per week. Forty-five per cent of the respondents state that 40 hours comprise the average workweek for their workers.

Sixty-two per cent limit the workweek of their employees because of the necessity of paying higher overtime rates after 40 hours of work.

The demand for their products would warrant giving more than 40 hours work per week to their employees if the law did not require paying higher overtime rates, state 85 per cent of those responding.

The workweek should be between 40 and 45 hours before employees receive higher rates for overtime work, in the opinion of 36 per cent of the respondents; 23 per cent say it should remain at 40 hours; 21 per cent advocate 45 hours; and 20 per cent believe it should be over 45 hours.

A majority (53 per cent) of the respondents do not believe their employees would be willing to work 44 hours per week at straight-time rates.

If employees worked 44 instead of 40 hours per week, there would be a 10 per cent increase in production in their plants, 55 per cent of the respondents believe. Production increase would be under 10 per cent, according to 27 per cent of those replying.

—*Mill & Factory* 2/48

Industry Goes West, South—and to Smaller Cities

NEW factories are sprouting fast in small cities, the west, and the south. More than half the new plants built since the war are in cities with populations of under 100,000. In Tennessee, for instance, nearly one-third of the new plants erected last year were in little towns having less than 5,000 population.

Why is industry building so many plants outside the big cities? An International Harvester official puts his finger on one among many reasons: "The man in a small town who owns a home with a green lawn around it is almost always a better worker than one who lives in a city slum where his kids have to play in the street and breathe soot instead of fresh air."

Towns and cities with under 100,000 population collected 55 per cent of the 2,038 plants built from the war's end to last October. During January and February this year, 60 per cent of the new factories were built in these small cities. A greater number of plants have been located in California since the war than in any other state. Illinois ranks second, and Pennsylvania and Texas tie for third position.

Industrial firms have been spending $1.5 billion for these plants constructed since the war. They plowed more money into new factories built in Texas than any other state with California second, Ohio third, and Pennsylvania fourth. The showing of states like Illinois, Ohio, and Pennsylvania of course indicates the midwest and east are expanding heavily, too.

While better human relations is a top reason for the current industrial decentralization, there are numerous other contributing factors. Among these are the desire to cut costs of distribution and of hauling raw materials.

Moreover, practice of some towns of subsidizing new plants to attract manufacturing firms has spread since the war. Here's how it's done: Louisiana towns are granting partial tax exemptions for 10 years to attract new factories. Across the border in Mississippi, towns sell bonds and use the proceeds to build new plants for companies.

Other companies are decentralizing so they won't have too many employees in one spot—then if they have to lay off workers it won't disrupt a whole town's economy.

—JOHN A. MCWETHY in *The Wall Street Journal* 3/29/48

• *Business is experimenting* with union labor representation on boards of directors. It may be significant that the tendency develops after organized labor suspended its efforts to force its way into directorships. The latest and still one of the first corporations to take this step is Freezer Foods, Inc., of Chicago. Its stockholders have elected to the board Rudolph N. Marginot, an A. F. of L. official, now director of the labor policy division of the Smaller War Plants Corporation.

—*Public Relations News*

A Suspicious Glance at Rule Books

MANY of our small irritations in life are directly traceable to rule books. Manuals and guides are no doubt necessary adjuncts of large organizations, but as written and enforced they too often contain factors seriously damaging to public relations.

It may seem heretical to make such a contention, in view of the purpose of the organizational rule book: to teach employees organization policies and to direct them in hewing to the line of those policies. Assuming the policies are fundamentally sound, the use of the rule book should be all to the good. But in actual practice it *isn't* always to the good.

Why? Because, as written and observed, rule books tend to be too inflexible—to lack the resiliency that is indispensable in the conduct of human relations.

"No, we can't do that because it says here in Section 5 Paragraph B that it has to be done the other way."

"Sorry, I realize you may miss your train, but this ticket has to be corrected. It says so in the manual."

Ninety-eight times out of 101, strict adherence to the rules is sound practice. But when a circumstance arises in which the literal observance of a rule can work unnecessary and sometimes serious hardship on a customer (or employee), the owner of the rule book, instead of throwing it at the customer, should be allowed (figuratively, of course) to throw it out the window, and exercise his own less rigid judgment.

Take the case of a motorist who starts on a trip, secure in the knowledge that he has had his car thoroughly checked and has just recently bought a new set of tires. What does he have to worry about? Nothing—so he thinks.

For some unaccountable reason one of his new tires blows out, before he even gets out of the state. He stops in at a service station, owned by the same company that sold him the tires, and gets a new one. He assumes that the local representative of the company will take charge of the defective tire, make a report on it, and in due course the customer will get a satisfactory adjustment.

But no. It doesn't work that way. He is told that the tire has to be taken back to the point of purchase. Now, that may be required in the rule book, but if it is, the writer of the rule book or the executive who passes upon it has missed an important point in customer relations. And the salesman who has to enforce it shares in the blame—administered freely by the disgruntled customer—because that salesman lacks authority to deal realistically with an intolerable rule.

Nor is management the only offender in this regard. Labor organizations are guilty too. A craftsman in one union may not turn a hand in another craft, no matter how closely related, nor how important might be the accommodation to his employer or to a friend in the second union.

There are times when a reasonable relaxation of the rules would be helpful, and in no sense would hurt anyone. Yet the rule book says *no*.

What is the cure? Less rigidity. But how bring it about?

The cure for the evils of the rule book is a recognition of the need to wink at it when circumstances warrant. That means a bestowal of some degree of

authority upon those who have to live by such books. That, in turn, means intelligent training of personnel to the end that a man may develop judgment and have the authority to exercise that judgment within the liberal scope of his capacity and position. There is always someone higher up to review the decisions of the man on the firing line, and put him right if necessary. And that in turn gives the man higher up an opportunity to execise *his* judgment.

The makers of manuals will probably throw up their hands at such heresy. "Why!" they will say, "it isn't practical! The ordinary guy on the sales line isn't qualified to modify policies as he may see fit, or to make exceptions to the rule! After all, we can't discriminate! We have to treat everybody equally—no matter *what* the circumstances!"

To which one might, with all due respect, reply: "Nonsense. Don't be too lazy to train your people. In the end, you of the executive level will be better off, too, if you train and encourage your people to use their heads, rather than require them to be robots."

BY EDGAR A. WAITE. *The Public Relations Journal,* February, 1948, p. 15:3.

The Quality Paradox*

TODAY'S techniques of quality control are so revolutionary that they have been compared with the introduction of the microscope in the physiological sciences. Scientific quality control reveals not merely flaws and faults but their causes and origins in the production process.

In one instance, a manufacturer, looking for the cause of a recurring flaw in a component part, set his engineering department to work to find out the source of the trouble. After six months had passed, he still did not have the answer. In desperation he called in statistical quality control experts, and within two weeks their report told him what the difficulty was. It happened that at the same time his engineering department also came through with a report pointing to the same cause. But in one case it took six months—in the other, two weeks.

The war period gave impetus to the use of this new and highly efficient tool of inspection and control. It made possible the production of millions of dollars worth of precision war material; in fact, some of the techniques of quality control were considered of such strategic importance that they were top-drawer military secrets.

Yet, withal, complaints about the quality of certain products continue to mount. Manufacturers complain about the uneven quality of parts obtained from vendors—under the greatly expanded system of subcontracting which the war also created. Meanwhile, the outcries of the ultimate consumers of all sorts of appliances and household wares are heard on all sides. Thus we have a situation that would appear to be a paradox: Though management has a new tool for quality control "as revolutionary as the microscope," postwar products in some industries leave much

* By JAMES O. RICE.

to be desired. The only possible answers appear to be either that management is not using the tool or that industry is not trying to correct the conditions which this new procedure reveals as the causes of poor quality.

But one thing is certain: Correction of a bad condition requires more than mere diagnosis. Quality control requires persistent follow-up by top management, which will ascertain that the indicated corrective action is promptly taken and that substandard merchandise is not shipped to customers.

Statistical quality control does not eliminate the human factor; it merely minimizes the chance for human error in inspection. The inspectors themselves—especially the chief inspectors, whose departments may be reduced with a consequent loss of prestige to them—must be made to realize their contribution to the success of the company. Quality improvement depends on a better selection of workmen (through aptitude tests, for example) and better training, particularly of supervisors. Quality must be "talked" constantly—it must be stressed above everything else. Savings to be achieved in preventing spoilage and getting maximum yields from raw materials must be emphasized.

Inspectors should be made to realize that their responsibility for quality transcends any relationships that they have with fellow employees, who may even be members of the same union. In some instances, manufacturers consider quality of such importance that they have placed the chief inspector in the same rank with the plant superintendent, so that he cannot be talked down by a workman, a foreman, or a union steward.

Observers who are familiar with conditions in large numbers of industries report an increasing use of statistical quality control and more thorough follow-up on it in broad sections of industry. Companies are encountering more choosiness among buyers, stiffening competition, and, in some cases, a falling off in volume.

Quality products not only can win more customers but can save more money by eliminating spoilage. Henry Ford is quoted as saying, "If we can make it right, we can make it cheap." Substantial reduction of spoilage can mean a lower break-even point and, since statistical quality control discloses the causes of spoilage, it has broad implications for improved managerial performance at all levels.

Top management support is the *sine qua non* of success in realizing the full potential of this new management tool. In one company that makes large custom-built machinery, any piece of equipment returned by a customer is uncrated and examined personally by the chief inspector himself, with the company president supervising the job.

When the top officers take that much interest, the rank and file begins to realize how much quality is appreciated and how determined management is to get it.

•INDUSTRIAL MOBILIZATION CENSUS: The Munitions Board of the National Military Establishment is about to start a survey (not an active procurement program) of the nation's industrial plants. Representatives of the three Armed Services will visit, initially, about 11,000 of the existing 86,000 plants.

—*A.A.P.M. Bulletin*

The Next Round—Wages and Prices

TWO-THIRDS of union members interviewed throughout the country in the current poll of the nationwide Wage Earner Forum, conducted by Macfadden Publications, Inc., say there will be another round of wage increases this Spring. But only slightly more than one-third of union members feel that unions are justified in demanding pay rises at this time. Among all respondents in this survey, both union and non-union, the percentage who feel that unions should demand pay increases now is greater in the far West and smaller in the South than in other parts of the country. The strongest feeling for this demand is among the 35- to 44-year-old age group.

More than three-fourths of the respondents say that such wage increases, if granted, will result in price increases. Two-thirds say that most companies can raise wages without raising prices. This is the pattern of all wage earners, including union members; but only half the surveyed workers who are not union members believe companies generally can raise wages without raising prices.

In response to the query: "Can your company increase wages without raising the price of its products?", somewhat more than half the workers surveyed said they felt that it could. This was nearly 60 per cent for union members and 46 per cent of those who are not members of unions. Here again appear some geographical variations. Fewer of the workers in the South and considerably more of those in the far West felt that their own company could increase wages without price increases.

Flying Freight

THE men who keep America's freight trains rolling are dreaming fresh dreams of boxcars in the sky.

Thus far the government has excluded railroad operators from running scheduled air lines of any sort. Train men have protested; they've been rebuffed, but they're still pressing the fight in an effort to cut themselves a piece of the freight-by-air pie.

And the train men aren't bestirring themselves for nothing. Flying freight is coming of age. Significant is a comparison between air passenger travel and air cargo shipments. Passenger traffic, after a rocket-like spurt from its prewar volume, leveled off late last year and hasn't changed much since. Not so air cargo; it's soared 100 per cent above a year ago. Moreover, according to the experts, it's going to keep on soaring! "I look for cargo business to equal or exceed passenger traffic in five years or so," says a key executive of one of the big airlines.

That would be a gain of at least 400 per cent in the next half decade. And it's not the most optimistic prediction. Some air men say confidently that air cargo volume will jump 1,000 per cent by the mid-1950s.

Of course a prime factor in any transportation is cost. This has been a big handicap to air cargo, but the handicap is being rapidly whittled down. While rail express rates have risen as much as 35 per cent from late 1946, air cargo rates have taken a sharp tumble. For example, a plane-load lot from New York to Chicago would command today a rock-bottom level of 11½ cents a ton-mile, about 3 per cent under the corresponding rail express rate. The latter, however, includes door-to-door delivery, while most air cargo shipments are quoted airport-to-airport.

In many cases, door-to-door delivery is actually cheaper by air cargo than by rail express. A big New York dressmaker, shipping in quantity, can whip a dress from his factory to Chicago, door-to-door, for 5.2 cents. It costs him 5.3 cents to send it by rail express.

Air cargo rates are not so high as are the rates for air express, ordinarily used for shipments of smaller bulk. Air express items get more expeditious handling and are also picked up and delivered by the Railway Express Agency. Air express costs the shipper about 45 cents a ton-mile. Even so, it is actually cheaper in a few cases to ship by air express than by rail express. Between New York City and Albany, N. Y., a distance of 149 miles, delivery of a 32-pound shipment by air express costs only $1, whereas by rail express it costs $1.42.

—*The Wall Street Journal* 1/10/48

Public Relations Expenditures

PUBLIC relations budgets will increase substantially this year by comparison with 1947. Reasons for those increases and the assignment of the function in the organization chart are as confusing as a Punch and Judy show.

A survey recently completed by *Public Relations News* among its subscribers shows that, of the organizations they represent, 77.4 per cent will increase their budgets, 14 per cent will cut their appropriations, and 8.6 per cent will operate on the same budget total as last year.

The survey revealed that funds for the public relations function appear in 16 different categories among the organizations responding: About 55 per cent of them have a separate budget for public relations; 20.5 per cent get their funds through the advertising budget; in 12 per cent of the cases, provision for public relations expenditures is made through a variously designated function, which means general administration. The public relations budget is hidden in appropriations for the sales department in 4 per cent of the cases.

An inquiry that sought to determine the yardstick for arriving at the total appropriation for public relations revealed that few of the respondent companies have fixed upon a percentage of sales as a guide. Even fewer let the number of employees roughly determine the size of appropriations. But not one out of nearly 2,000 replies even suggested that they had found a satisfactory formula for determining what appropriation is logical. Perhaps the best answer to this question was given by a railroad president, who said: "We determine what are our public relations problems by the most accurate means we know. We use opinion surveys and carefully analyzed reports of labor-management meetings and employee round tables. We decide what must be done to solve the more important problems, and what can be done to solve those not so important now but potential of trouble later. Then we figure out how much money we need to solve the important problems and to make a start on the potential menaces. We appropriate that much and hope for the best."

NOTE: Reprinted with permission from *Public Relations News,* 52 Vanderbilt Avenue, New York 17, N. Y.

Selling Industry to the Community

A HIGHLY effective approach to industry's community relations problem, which might well offer a pattern for other cities and industries, was taken last fall by the manufacturers and processors of Quincy, Ill.

A survey of public opinion of Quincy citizens, conducted under the sponsorship of the Industrial Association of Quincy, Inc., revealed the need for more information about local industry. It was discovered that many members of the community were unware of what products Quincy plants manufactured, and lacked an appreciation of the importance of manufacturing to the community's economy. Citizens were sounded out on such questions as: "What do you dislike about local factories?", "Do you feel that officials of local factories show an interest in making Quincy a better place in which to live and work?", "What one thing do you want officials of local factories to do to show more interest?", "How many cents out of every dollar that local factories take in do you think they are now keeping as profits?"—all of which brought to light sore spots and misconceptions that called for remedial action.

While much of the needed action indicated by the survey could be taken by individual plants, it was decided also to tackle the problem on a group basis. Most of the city's leading companies accordingly participated in a four-day "Exposition of Industrial Progress," which sought to tell the "how" and "why" as well as the "what" of local industry. Approximately 67,000 attended the show during its 1947 run (it is planned to repeat it annually)—an indication of its drawing power, since the population of Quincy itself is only 40,000. The exhibit provided convincing evidence of the tremendous influence which the manufacturing economy has on the living standards of the people, and it created an opportunity for each company's employees to demonstrate to their families and neighbors what they manufacture.

Local industrial associations, chambers of commerce, or others interested in such a community relations program may obtain a detailed report on the opinion survey and the exhibition from Charles H. Merideth, Executive Vice President, Industrial Association of Quincy, Inc., Quincy, Ill.

OFFICE MANAGEMENT...

Office Unionization—Is Management Facing the Problem Squarely?

By DAVID MACK

MANAGEMENT frequently tends to think of its employee relations problems almost exclusively in terms of their legal aspects. Because of this tendency, it all too often loses sight of the basic conflicts which engendered those problems. It overlooks the fact that they are fundamentally problems in *human* values. Labor-management conflicts are conflicts of *human* interests, arising from *human* forces engendered by *human* strivings. Those who comprise both management and labor are *human* beings.

Every man, whether a representative of management or of labor, being human, will strive for food, shelter, a place in society, recognition of his dignity as an individual, and other forms of security. No amount of legislation will stop him. Nor will any amount of legislation prevent the conflict of human interests certain to arise if a group of men, united in order to gain strength in their determined search for security, run head-on into a second group which, similarly organized and likewise seeking security, is powerful enough to prevent the first from acquiring, or from believing it can acquire, what it considers its just share. Such is the management-labor conflict. The solution is not a legal one, because it is not a legal problem. It is a deeply *human* problem—to be solved by the application of *human*, not legal, principles.

Over the past 30 or more years, we in office management have been watching unionism in the factory grow from the noisy and annoying agitation of a small minority, originally thought of as "radical," to the formidable force it is today. In the course of this evolution, we have watched factory management's thinking undergo a tremendous change. It was not many years ago that management, to a man, was convinced that unions and unionism were unequivocally wrong—and, of course, that management was equally right. Today, however, we find enlightened factory executives frankly recognizing that in much the unions have stood for they have been right, and in much management once stood for it was wrong.

Today the white-collar union looms ever larger on the American industrial scene. Unrealistically, office management is inclined to look upon the current stages of office unionization as the noisy and annoying agitation of a small minority of "radical" clerical employees. Must we learn the hard way? Or will we be wise enough to borrow from the experience of those who have been through the mill? Should we not begin *now* a campaign of self-education to learn by example what factory management was forced to learn by experience? Let us explore five areas in which office management can profit ex-

From an address before the Montreal Chapter of the National Office Management Association.

tensively from the experiences of factory management.

To begin with, in factory after factory experience has shown that when management fights unionization, it not only incites the radical element among its employees—those temperamentally prone to fight back—and those too new to have become steeped in the company's traditions or "sold" on its good intentions, but also discourages its older and more loyal employees from assuming leadership of the union movement. If, on the other hand, a company takes in stride and tries to understand the motives underlying the union activities of its workers, its more loyal employees, feeling the sanction of management, may take an active interest in the program, exert a salutary influence upon the formulation of union policies, and more often than not assume leadership.

There is a second area in which office management might profitably learn from those industries which have long been unionized. Much, though by no means all, of what is advocated by organized labor is no more nor less than sound management. True, the salary increase demands of office unions sometimes border upon absurdity, causing management, perhaps understandably, to conclude that any union tenet is contrived to contravene the fundamentals of sound management. But the union demands are more far-reaching and deep-seated than is apparent from such salary requests. They ask of management: Specifically, what is the job for which each employee was hired? Exactly how does the skill required on each job compare with the skill required on each other job in the office? How does the amount of money you pay for any particular job compare with what you are paying for other jobs requiring equal skill, more skill, less skill? If, after the employee has been working on this job for a while, the duties become more complex and the degree of required skill increases, is there any assurance that the employee will receive more money for the greater output? Just what assurance does the worker have that you are paying him what his services are worth in relation to what you are paying other employees for their services on similar or different jobs? These questions are fair and in the name of just and sound management demand forthright answers. Yet they can be embarrassing questions unless your office has a clearly defined job analysis, job classification, and job evaluation program constantly at work and understood down the line by a supervision "sold" on its merits as a tool helpful in carrying out supervisory responsibilities.

What is the white-collar union position on the part seniority should play in eligibility for job promotion? In November, 1945, Mr. Lewis Merrill, then President of the United Office and Professional Workers of America, CIO, stated: "Recognition and reward for individual ability is an even more important consideration to employees than it is to management."* Mr. Leon W. Berney, Vice President, stated: "Our union never seeks a seniority clause which raises the question of permitting length of service to take precedence over merit. Seniority is regarded rather as a guarantee of the right to promotion on the basis of merit."* From the viewpoint of sound management, is it not good business to accord such consideration to the ability and seniority of your office workers?

A third principle which, if borrowed by office management from long-union-

* American Management Association, *Office Management Series Number 111.*

ized industry, would simplify all dealings with employees—unionized or non-unionized—has been expressed succinctly by Mr. Glenn Gardiner, Vice President of the Forstmann Woolen Company: When there is disagreement between management and the employees, the issue should always be decided on the basis of *what* is right rather than on the basis of *who* is right.

Now for the fourth area in which office management can profit from the experience of factory management. Initiate as soon as possible a systematic and thorough review of your firm's personnel policies and practices, and establish a system which assures a periodic review of them. Insure that they are not now, and never become, obsolete, unrealistic, untenable. The mere fact that a firm has "always done thus and so" in a particular kind of situation is no assurance that the practice is acceptable to the employee. Unionism flourishes upon outmoded personnel practices. It is largely because of this that offices have become recognized as happy hunting grounds for labor organizers. Where could be found better "pickings" for organized labor than, for example, the low salaries currently being paid to so many white-collar workers? Have you recently compared your personnel policies with those prevailing in the area? More to the point: Have you recently reviewed the union contract currently in force in some office similar to yours to see if your policies seem to be out of line with what managements of unionized offices are agreeing to?

Last, but by no means least, is one of the most important things to be learned from the experience of factory management: Supervision must be trained to be an effective part of management. It is easy for top management to assume that lower, middle and upper supervision is "management-minded" because it is referred to as "a part of management." Such an assumption, however, may be entirely false—is, indeed, false unless supervision is made to *feel like* management.

With respect to your own company, face the facts and answer the following questions honestly, remembering that by "supervision" is meant your department heads, assistant department heads, section heads, unit supervisors—the men on whom your company depends to implement the wishes and desires of top management:

> Do they know what top management's plans are for the future of the company? Or are you expecting them to follow blindly the instructions given them, without knowing in what direction those instructions lead? Do they know, in general, whether the production program is up to or behind schedule? Or is this information, so vital to the company's well-being, regarded as none of their business? Do they receive any sort of annual report of the company's profits and financial status? Or does your company forget about them, assuming that only the stockholders and top executives are concerned with such matters? When top management passes along to supervision new instructions and directives, is supervision told *why* these are being issued, and the basic reasons behind them? Or is supervision expected merely to follow these directives blindly? When the company starts to manufacture a new product, or buys a new building, or makes vital organizational changes, is supervision told about them in advance? Or do they first learn of them from the trade papers or public press? When a disciplinary problem arises or a personality clash occurs among the clerks in one of your departments, are you always sure that "the boss" is capable of handling it in such a way as to gain the respect of all the employees under him? Or is there a chance that he will so bungle the situation as to arouse the ire of his subordinates?

The organizing of white-collar workers in all probability will have more of a bearing than most of us now suspect upon the molding of democracy's man-

agement-labor philosophy. Office employees have an opportunity daily to observe top and middle management at work and to evaluate management's performance. These workers almost inevitably absorb some of the basic fundamentals of management and know what the company's executives are thinking. Does it not seem inevitable therefore that these white-collar employees ultimately will exert a profound influence upon labor's thinking? Will their influence be for the betterment of labor-management relations? That is a question which cannot be answered here. Its answer depends upon how we in management conduct ourselves.

NOTE: See also *Collective Bargaining in the Office*, American Management Association Research Report No. 12, New York, 1948. 120 pages. $2.50, members; $5.00, non-members (distribution restricted to *company* members until August 1, 1948).

New York Area Office Worker Salary Survey

ABOUT 900 firms in the New York metropolitan area are participating in a Bureau of Labor Statistics survey of office workers' salaries, now nearing completion in the field, it has been announced by the Regional Director of the BLS. The survey will yield wage and salary information for 23 important clerical jobs. The following major industry groups are included: wholesale trade; finance, insurance, and real estate; transportation (except railroads), communication, and other public utilities; retail trade; and selected branches of the service industry group. Information on standard work week, vacation, and sick leave provisions will also be summarized.

A preliminary report summarizing the area-wide averages will be released this month. A final report in booklet form with detailed information for each industry group will be issued a short time later.

Similar reports will be available in nine other areas: Buffalo, Boston, Atlanta, Chicago, Milwaukee, Denver, Dallas, Seattle, and San Francisco.

Copies of any of these reports may be obtained without charge from the Bureau's Regional Office—Room 1000, 341 Ninth Avenue, New York 1, N. Y.

Earnings of Office Workers in Buffalo

STRAIGHT-TIME weekly earnings of women general stenographers in the Buffalo area average $38.01, it has been announced by the Regional Director of the Bureau of Labor Statistics, U. S. Department of Labor. Other occupational averages for women, as revealed by the survey in which 194 Buffalo area establishments cooperated, ranged from $28.50 for office girls to $45.68 for technical stenographers. In 10 of the 22 occupations employing women, the averages were between $35 and $40 per week. Women in four occupations averaged more than $40.

The employment of men was relatively small in the occupations covered by the survey, which was limited to non-supervisory, non-professional, and non-executive categories. Weekly rates for the men ranged from an average of $30.54 for office boys to $62.60 for hand bookkeepers.

The Bureau's study included an analysis of non-wage provisions of employment. Formal provisions for paid vacations were reported for office workers in all the 194 establishments studied. Slightly less than two-thirds of the establishments had vacation plans providing for two weeks of vacation after one year of service.

Formalized provisions for paid sick leave were effective in 43 of the 194 establishments. There were wide variations, however, in the basic sick leave provisions among these 43 establishments.

Inventory Control of Office Forms

INDIRECT costs are equal to 50 per cent or more of the direct costs of a company's stationery. In other words, for every dollar a firm spends or pays to printers, 50 cents or more is spent on handling the items bought. But these indirect costs can be drastically cut—through proper purchasing methods and proper handling. It is the purpose of this presentation to show how such savings can be effected.

To begin with, let's assume 75 clerical and 50 factory employees of your firm use stationery. Assuming for each employee using stationery an average annual cost of $150, you would have a yearly expense of $18,750—let's say $20,000 to simplify things.

Now, to consider the indirect costs, item by item:

RENT. Do you charge this to stationery costs or to general overhead? The rental charge against any other department would become an integral part of the firm's selling prices. To maintain a $20,000 operation would require about 2,000 square feet for storage and handling. At $1 per square foot rental, this would mean a cost of $2,000 per year. With proper controls, however, this can be reduced at least 50 per cent, producing a savings of $1,000 a year. One company reduced its stationery rental by purchasing smaller quantities under careful inventory control, and by arranging a contract with an envelope factory which permitted a release of 1,000 square feet of space. Incidentally, this arrangement also released two men for use in other departments, which alone saved the firm $6,000 a year.

PERSONNEL. To what do you charge this expense? Is it added to the cost of your stationery, or is it just another overhead item? Ten to one its just a factory or office payroll item.

A $20,000 stationery cost normally will require two people to handle. But proper contractual arrangements and stock controls will make this a part-time job for only one person—effecting a wage saving of 1½ persons, or not less than $2,250 annually (at a minimum wage rate of $25 per week).

BUYING COSTS. To operate this stockroom, you would have to place about 200 orders a year. This is based on your having 500 forms. Assuming a $5 cost for each purchase order, you will incur an expense of $1,000. But proper controls and contractual arrangements with your printer will eliminate most of this cost. Your requisition can become your purchase order. If your system requires a purchase order number for control purposes, this can be done by issuing a monthly order number, or by placing orders at a fixed time each month so that not over three orders will be issued monthly. Three orders monthly at this rate will cost you $180 a year—a positive saving of $820.

RECEIVING COSTS. Under controls that can be set up through contract arrangements with suppliers, deliveries can be placed on a twice-monthly basis—meaning just two orders to be received and cleared monthly.

ACCOUNTING COSTS. If you are on a discount basis, to pay 200 invoices a year you would have to issue at least 100 checks. This, with all the other required bookkeeping, calls for hours of clerical effort. The stock control and contract system of buying stationery supplies would require only 30 entries and 12 checks.

INTEREST. If your stationery expense is $20,000 a year, you will have an average inventory of about $30,000. The interest charge on this $30,000 inventory, figured at 3.5 per cent (the insurance investment average interest rate) would amount to $525 a year.* Under an inventory control plan, using the same interest rate, your cost would be $87.50 on a $5,000 inventory.

OBSOLESCENCE AND SHELF-WEAR. These two invisible cost items figure at least 2 per cent each in most companies, and in some, such as financial organizations, run as high as 10 per cent. Proper stock controls, however, bring this to almost a minimum. Savings on this item therefore, presuming you still had a 1 per cent loss, would amount to $600.

DESK LOSS. Too many forms are kept in employees' desks. Often they are used for scrap paper, get dirty, or drop on the floor. Proper controls can reduce this loss by at least $1,000.

Following are some suggestions to help you put an inventory control system into operation:

1. The main stockroom should have control of all stock—even items used by one man only.
2. The office should be divided into sections and a six-weeks' stock of all items used in each section should be maintained there. This stock should be kept locked and under the control of one person.
3. A list should be made and kept on file showing how many of each form makes a six-weeks' supply. Once monthly this stock should be replenished. Only enough items should be requisitioned to bring this stock up to the six-weeks' supply. This replacement by sections should be staggered so that the main stockroom is not overworked.
4. Each employee who uses forms should be instructed to make a report in duplicate indicating how many of each item he uses daily, weekly, monthly, or yearly. In the case of forms used monthly or yearly, the report should tell what time of the month or what month in the year they are used. Every employee should be allowed a two-weeks' supply. After the first two weeks, the employees should replenish their supply from the sectional stockroom. This should be done weekly thereafter—with each person being allowed only a week's supply. (The first two-week period will give you time to study the reports and determine the stock to be set up in the sectional stock supply.) This step should include, in addition to letters and forms, all items such as pens, pencils, clips, etc.
5. A card index should be set up (based on the reports from employees—see No. 4) showing complete stock on hand, monthly usage of each item, quantity of each item ordered. It should be so planned that the record on every item comes up at certain periods to be sent to the main stockroom for report and ordering. This check should be made six weeks before the form is needed. It should be checked and returned with all information, requisition, etc., by the stockroom within one week—ten days at most. The orders should then be sent to the printer so that he will have at least thirty days to deliver.

For determining quantities to order and time periods between orders, the following recommendation is made: If you use 1,000 or less a year, order the year's supply, setting a minimum of 500 as the order quantity. You pay for 500 even though you do not get them. If you use 2,000 or 3,000 a year, order 1,000 at a time. If you use:

4M, 5M, 6M, order 2,000
8M, 9M, 10M, order 3,000
12M, 13M, 14M, order 4,000
15M, order 5,000
20M, order 6,000
25M, order 8,000

In other words, with the exception of the quantities of 2,000 or under, order a quantity you will use in four months.

One last warning: Be sure when you put this system into effect that it includes all officers and their secretaries.

BY SAM HART. *The Controller*, November, 1947, p. 562:3.

* To figure interest, take half the investment for one year. This is done because the stock is moving off the shelf. Therefore only one-half is to be considered for the elapsed time.

PERSONNEL...

Extent of Non-Production Bonuses

NON-PRODUCTION bonuses were paid by two-fifths of the manufacturing and about half of the non-manufacturing establishments surveyed during 1945 and 1946 in connection with extensive wage studies by the Bureau of Labor Statistics. Christmas bonuses were by far the most common type and were paid in over four-fifths of both the manufacturing and non-manufacturing establishments that provided bonuses. Profit-sharing bonuses ranked second.

In general, the data obtained by the Bureau provides information on the extent of non-production bonus payments in various industries, and their relative importance in the general wage picture, rather than detail on variations in individual firm practice.

For the most part, the payments seem to be intended to boost morale, to improve attendance at the plant, store, or office, to stimulate workers to save power and materials, and to grant workers a share in the profits of the firm. Insofar as such payments heighten the interest of workers in their jobs, output per worker may be stimulated. Directly, however, non-production bonuses are not related to the output of individuals or groups of workers. The payment of such bonuses should not be confused with the use of incentive methods of pay. Moreover, they are not paid frequently enough nor are they sufficiently regular in amount to be associated with hourly rates of pay; in this respect, they may be contrasted with cost-of-living bonuses. Moreover, decisions as to whether such bonuses will be paid and how large they will be are generally subject to the discretion of management alone.

Plant workers received some form of non-production bonuses in two-fifths of the manufacturing establishments studied. Of the industry groups covered in the survey, the chemical and metalworking industries appeared to lead, with half of the establishments reporting such payments; the apparel industries had relatively few (one in four) establishments in which non-production bonuses were paid. In the textile industry, about two-fifths of the plants reported such bonuses. Office workers in manufacturing industries appeared to receive bonus payments more frequently than did plant workers.

About half of the non-manufacturing establishments studied also reported the payment of non-production bonuses. Upwards of two-thirds of the retail-trade establishments (limited-price variety stores, clothing stores, and department stores) reported this practice. Relatively fewer establishments in other industries—such as public utilities and selected service industries—reported non-production bonuses; the proportion of plants ranged from one-fourth for the electric light and power industry to nearly two-fifths for warehouses.

The payment of non-production bonuses appears to be associated with particular industries rather than with the geographic location of establishments. A regional distribution of establishments paying bonuses indicates that particular industries maintained their rank in most regions; i. e., industries

that ranked high in the payment of such bonuses in the country as a whole generally ranked high in each region.

Numerous forms of non-production bonuses were reported; but many kinds did not occur frequently enough to warrant separate study. In some establishments more than one type of bonus was paid. Christmas bonuses were by far the most common type; they were provided in over four-fifths of both manufacturing and non-manufacturing establishments paying bonuses. Profit-sharing bonuses, ranking second, were paid mainly in the chemical, metalworking, and department store fields, and in about the same proportions (4, 3, and 4 per cent, respectively). Attendance bonuses were of some importance in laundries.

Non-production bonuses are of considerable importance to those workers who receive them, particularly since they are generally paid in lump sums at Christmas, a time of special expenditures. One of the chief interests in the present study, however, centered on how much such payments raised the hourly earnings of workers in particular industries. When such bonuses were averaged over all workers in each of the various industries on an annual basis, there were few instances in which they increased hourly pay by as much as 1 cent for plant workers and 2 cents for office workers. Nevertheless, some establishments in nearly all industries made average payments of at least 10 cents an hour or about $200 annually per employee. Generally, however, all workers in a plant did not share equally in these payments. In some establishments bonuses were limited to specific categories of workers, such as working foremen, but in most cases they applied to all workers. In the latter situations, bonuses to individuals usually varied with length of service, total amount earned annually, number of weeks worked in the year, or other factors. Usually, profit-sharing bonuses, though much less frequently found than Christmas bonuses, yielded the highest amounts per worker.

Monthly Labor Review, October, 1947, p. 451:2.

Civil Service Opportunities for Personnel Workers

THE New York State Department of Civil Service has announced that 10 examinations to fill vacancies in personnel administration and research will be held in the near future. Both residents and non-residents of the state will be eligible for the following seven positions (position numbers are indicated in parentheses): director of public employee training (8077), principal personnel technician—examinations (8078), associate personnel technician—examinations (8079), associate personnel technician—research (8082), senior statistician (tests and measurements (8085)), senior personnel technician—examinations (8080), and senior personnel technician—research (8083). Three other examinations for personnel technicians (positions #8081, #8084, and #8058) will be limited to New York State residents.

Entrance salaries range from $3,450 to $6,700, with five annual increases thereafter. Several vacancies exist for some of the positions.

Applications may be filed up to May 8. Arrangements will be made to hold examinations at nearby locations for those filing from out of state. For detailed circulars and application forms, address Examination Division, State Department of Civil Service, State Office Building, Albany, N. Y. Specify number and title of position, and enclose a self-addressed return envelope bearing 6¢ postage.

Arbitration Must Improve or Bankrupt

ARBITRATION as a process for the settlement of labor disputes did not become prominent in the field of labor relations until shortly after the turn of the last century. From then on, its use flourished on a more substantial scale. It was in the mid-thirties, however, that it was given unprecedented impetus. Passage of the Wagner Act provided for the recognition of unions for purposes of collective bargaining. For labor disputes resulting from deadlocks in collective bargaining, it had no effective remedy. As a result, both employers and unions began to resort more and more to the medium upon which they had previously frowned—voluntary arbitration.

It is, of course, an inevitable concomitant of the expansion of the use of arbitration that arbitrators increase in number. Within the last few years, however, the country has spawned an unusually large number of persons, in diversified walks of life, who hold themselves out as arbitrators. It is almost inescapable that in such a heterogeneous group should be found an unwarranted percentage of arbitrators who lack the requisite qualifications. It is for this reason that parties engaged in arbitration today must too often contend with incompetence, conscious or unconscious bias, at least questionable integrity, and other deficiencies that jeopardize the important and heavy stakes involved in their cases.

A case in point occurred in an arbitration hearing in which a company and a union were involved. The issue submitted to arbitration by the parties concerned the interpretation of one of the wartime regulations.

The first boner pulled by the arbitrator was in the matter of transcripts of the proceedings. He ordered (sic) that the company furnish, at its own expense at least six copies—his own, the union's, and copies designated for governmental agencies. One of these was intended for the National War Labor Board, which did not appoint the arbitrator or have any jurisdiction in the dispute before the arbitrator. Taking exception to the order because of principle and expense, the company spokesman stated that the company would bear the expense of the arbitrator's copy, that the union, which carried the issue to arbitration, could obtain a copy at cost, and that both parties would share equally the expense of such other copies as would be actually required by the arbitrator. Displeased at the position taken by the company, the arbitrator glanced at the stipulation covering the issue to be arbitrated, and then laid it aside, indicating to the parties that the arbitration would proceed on the basis of the grievance as it was previously filed by the union in the second step of the adjustment procedure. With all respect to the arbitrator, the chairman of the company committee explained to him that the stipulation covered an agreement made and signed by both parties. To this the union assented. But the arbitrator decided that the subject matter of the arbitration would be as he previously had ruled. Finally, he again compelled the spokesman for the company to differ with him when he said that his award would have to be approved by the NWLB, whereas the regulation, application of which was at issue in the arbitration, specifically placed ad-

ministrative jurisdiction in another agency.

By this time, the company representatives had decided that three differences of opinion with the arbitrator at the very outset were sufficient and asked the arbitrator for a recess. During the recess, the arbitrator and the company spokesman agreed to submit the differences for ruling by the arbitrator's chief. The arbitrator was reversed on all three counts.

Flagrant as was the misuse of the arbitral process in this case, it is not atypic of the handling of many cases by similarly incompetent arbitrators.

What is the cause of such incompetence on the part of arbitrators in the handling of cases? Frequently it is lack of proper background. In too many cases, management agrees to the selection of an arbitrator who has neither adequate knowledge nor proper understanding of the possible ramifications of the case being arbitrated.

Similarly, arbitrators too often display bias. This is because too few arbitrators are acceptable to unions; thus some of them have a tendency to make a few awards skewed in the direction which will favor their future acceptability to unions.

Arbitration has advanced as far as it has because it has not been plagued with proved cases of fraud or corruption. Almost without exception, representatives of industry and labor will attest that the professional arbitrators with whom they have dealt have not been tainted by any action which would be construed as a violation of integrity. However, arbitrators are human and there are those who are interested in protecting and improving their livelihood, at the risk of weakened objectivity. This factor leads some arbitrators by indirection to stray away from standards of integrity.

While this is far from an indictment of arbitration as it is practiced by conscientious arbitrators, it must be admitted that some serious defects and undesirable practices have crept into the process. To correct them is obviously not an easy matter. But once they are objectively analyzed and diagnosed, the direction in which remedial action should be taken is made clear.

Some suggestions to management are presented below:

1. Arbitrate less and increase genuine, patient, calm collective bargaining, preceded by all-year-round realistic personnel administration and labor relations.

2. Abandon the defensive position in negotiations. Assume the offensive by submitting proposals to the union before the union presents them to the company.

3. Stimulate energetic employee relations, community relations, and stockholder relations, by means of which all concerned will be kept well informed at all times regarding company policies and plans, the issues involved in and the progress of wage and contract negotiations.

4. Exercise pressure, as the unions have done, on the public agencies which appoint arbitrators, to weed out the most obviously unfit from their lists.

5. Cooperate with government and other agencies in their every effort to strengthen arbitration in all its phases as a voluntary process, especially in the concise definition of the functions and duties of an arbitrator, and in the promotion of higher standards of integrity and competence through the development of canons of ethics.

6. Carefully select the arbitrator in each case through meticulous investiga-

tion of his background, his awards, and the manner in which he conducts his hearings.

7. Avoid ambiguities in contracts and include in them a clear-cut and catch-all management clause, together with an adjustment procedure that has arbitration as its terminal point for utilization whenever necessary.

8. Prepare thoroughly and make proper presentation in collective bargaining and arbitration. Personnel administration and labor relations have a tie-in with labor law. This, however, does not make industrial relations a part of labor law, nor justify the legalistic approach. Industrial relations are soundest and most amicable when devoid of legal technicalities.

9. Support trends favoring reasonably substantial fees for arbitrators with a view to the braking action of such fees upon excessive arbitration, and toward encouraging men of high caliber and requisite qualifications to enter the profession and earn a respectable livelihood.

10. Defend the company's position in wage and contract negotiations with courage, equity, and firmness.

By Edward A. Egan (Edward A. Egan Industrial Relations Associates, Chicago). *Mass Transportation,* January, 1948.

Premium Pay Provisions in Union Agreements

MOST union agreements in effect in the second half of 1946—85 per cent of 437 studied by the Bureau of Labor Statistics—provided overtime pay at the rate of time and a half for all work in excess of eight hours a day or 40 hours a week. Exceptions to this general rule were found in the West Coast longshore and in women's clothing industries. In flat glass, men's clothing, and leather products, it was not uncommon to find an established workday of less than eight hours and a workweek of under 40 hours, with the premium rate, however, starting after eight or 40 hours.

Almost half the agreements, covering over 750,000 workers in the sample, had provisions requiring penalty rates for work performed on Saturday as such; and about 60 per cent, covering a similar proportion of workers, required penalty rates for Sunday work as such. In these agreements, more than 80 per cent of the workers who received premium pay for Saturday or Sunday as such were paid time and a half for Saturday work and double time for Sunday work, irrespective of the number of hours previously worked during the week.

About a fourth of the agreements, covering approximately 40 per cent of the workers in the sample, specified time and a half for work on the sixth consecutive day. About 30 per cent, covering about 25 per cent of the workers, specified a premium rate for work on the seventh consecutive day; half of these workers received time and a half for work on the seventh day and the other half double time.

More than four-fifths of all workers in the sample received premium pay for production work on holidays. Of these, two-thirds were paid double time, one-third, time and a half. Six holidays were most frequently specified.

Three out of every four workers in the sample were under agreements which required a differential for work on shifts other than the first or regular day-shift. Workers on the third shift generally were paid a higher differential than were those on the second shift.

About 400,000 workers, or about a fifth of the sample, were under agreements which required a differential of 4 cents an hour for the second shift and of 6 cents for the third shift; about 120,000 workers were paid a differential of 5 cents for such shifts. Approximately 350,000 workers were covered by a differential of 5 per cent for the second and of 7½ per cent for the third shift; nearly 200,000 workers were paid a 10 per cent differential for such shifts. Other differentials ranged from 2 cents an hour for night shifts to 18 per cent (in one instance) for the third shift.

—*Monthly Labor Review* 10/47

The North-South Differential—A Different View

By A. W. SWINYARD and F. M. STEPHENSON

Business & Economic Research Center
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THIS article is a brief summary of a study presently being completed by the Business and Economic Research Center of Syracuse University.[1]

The basic purpose of the larger study is to analyze annual wage payments in the North and South to discover whether or not a differential exists, and, if so, the nature and composition of the differential. The existence of such differential has been taken for granted, probably too frequently, so that many business decisions have been made on what is a less than sound basis.

The larger study is devoted in part to analysis of the general "over-all" industry pattern of average annual earnings per employee in all manufacturing, in an attempt to discover the relationships between earnings in the North and in the South. Such factors as productivity per employee, average size of plant in each of the two areas, and population both of cities and of market areas without reference to political boundaries[2] were considered. The study analyzes also *rate differentials* by occupations and skills for certain selective localized industries—*i.e.,* industries in which the sale of the finished product is largely confined to the geographical area immediately surrounding point of production. Moreover, annual earning rates of employees in certain Northern and Southern areas were analyzed according to type of occupation and skill for non-localized industries—*i.e.,* industries whose product sales are not restricted to the area immediately surrounding the point of production.

The data on which this phase of the study is based were secured from publications of the Bureau of the Census, especially the County Data Book published in 1947. The data of the report, however, are for 1939. The study was limited to labor market areas of over 40,000 population in 13 Northern and 13 Southern states.

Though in general, in 1939, manufacturing employees in the North earned approximately $200 more than did those of the South, this differential tends to disappear as a meaningful figure when the income data are classified into five labor market groups. The smallest labor market considered was 40,000, the largest was 1,000,000 or over. In market areas of between 500,000 and 1,000,000 the average annual earnings of Southern workers amounted to $1,284 as against $1,244 for Northern workers. Surprisingly, the average wage of Southern workers in this group exactly equaled the average annual wage in the largest Northern group—1,000,000 and over. Thus the notion that Southern factory workers, during 1939 at least, earned less than Northern factory workers is not borne out by the statistics. For market areas of less than 500,000, there was a noticeable differential in favor of Northern employees, amounting to $236 in markets from 250,000 to 500,000 in size, $304 in markets from 100,000 to 250,000 in size, and $162 in markets from 40,000 to 100,000 in size. Further analysis indicates, however, that size of

[1] By the authors under the direction of Dr. S. C. Sufrin, Director of the Business & Economic Research Center.

[2] By market or market area is meant a population center, without reference to city, town, county, or state boundaries. The markets used in the study are those used by the J. Walter Thompson Company in its market analyses.

community was not the only factor in determining income differentials in 1939 between the North and the South. In Southern market areas where more than 1,000 manufacturing establishments were located, average annual earnings amounted to $1,273 as contrasted with $1,285 in the North. This differential in annual earnings is slight enough to be virtually neglected.

In general the study indicates that average annual earnings are fairly closely connected with *number* of manufacturing establishments in the market area. That is to say, where the demand for labor was high as a result of the number of establishments, which in a sense is a very rough measure of capital investment, wages tended to be higher than where the converse was true. This tends to support the common-sense view that earnings differentials are in great part the economic consequences flowing from the size of investment. In this regard it should be noted that only five Southern markets contained more than 1,000 manufacturing establishments, whereas nearly 50 Northern markets contained at least that number of establishments.

Labor productivity is difficult to measure. One simple and widely used measurement, however, is "value added by manufacturing." Another test of North-South annual earnings differential of 1939 was made in accordance with this concept. Six productivity groups, ranging from value added by manufacturing amounting to $2,000 per employee to value added in excess of $4,000 per employee, were constructed. Without exception, the average annual earnings increased as productivity per employee increased, *i.e.,* as value added by manufacture per employee increased. It is interesting to note that a slightly higher proportion of the value added by manufacture is paid out as wages by Northern firms than by Southern firms. Here again it should be noted that the great bulk of the industrial groups which produced more than $4,000 per employee as value added were in 30 Northern markets, while a small proportion were in the five Southern markets where more than 1,000 manufacturers were located.

This means that in 1939 more productive industries were located in the North than in the South and with this greater productivity went, presumably, greater ability to pay.

Incidentally, it should also be borne in mind that employment in the North, in 1939, was slightly steadier than employment in the South. That is to say, a Northern worker had a greater chance of a full year's employment than had a Southern worker.

The essence of a North-South annual income differential is further minimized, for the 1939 data, when it is recognized that on the average the cost of living in the South for a working class family was some 5 per cent below that in the North.

The general conclusion which seems to flow from the foregoing findings is that insofar as annual income is concerned the North-South differential *as such* does not exist, but rather there exist size of community, degree of investment, productivity per employee differentials, which on the whole tend to favor the North, though this favorable situation is not at all general.

With regard to *wage rates* paid by occupations in the central market areas of the North and the South, the study examined skilled trades, as in the book and job printing and newspaper industry. It was discovered that in 1945-1946 employees in cities of 100,000-250,000 and 250,000-500,000 actually earned more per hour in the South than in the North. (There is no Southern

city larger than 500,000 so that extremely large cities of the North could not be compared to those of the South.) From this part of the study it appears that skilled craftsmen in the larger Southern communities enjoyed higher rates than did such employees in like-sized Northern communities. Similar results have been discovered in the building trades, bakery industries, and other purely localized industries. In this part of the study, data were secured from Bureau of Labor Statistics reports. In the light of the above it appears that the structure of annual earnings differentials and wage differentials between the North and the South and between the various-sized communities of these areas is more complicated than is usually believed. Not only is this significant from the viewpoint of economic analysis, but it is also significant from the point of view of locating new investments and of more general questions of public policy associated with wage fixing or minimum wages. The level of annual earnings is closely related to degree of investment and size of community. Small towns and low investment are not a peculiarly Southern phenomena. The level of wages is also related to the problem of productivity, *i.e.,* value added by manufacturing. Increases in employee dollar productivity are, according to the analyses, so definitely related to various types of industries that earnings in the South seem to be dependent upon nature of Southern industries and type of new investments, as well as on the amount of new investments.

It should be noted that the larger part of the study was limited to earnings of employees in manufacturing. No attempt was made to measure supplementary earnings of any sort.

From the viewpoint of employee welfare, employment, and income, the economic considerations as outlined above provide a limit on the political and "pressure" arguments of collective bargaining.

G-E's Revised Pension Plan

RETROACTIVE pension payments totaling $201,000 will be paid to 1,144 retired employees of the General Electric Company under a revision of the G-E pension plan recently passed by the company's Board of Directors. Under the revision, a minimum "past service" pension of $12 for each year of continuous service prior to September 1, 1946, has been extended to all persons on the pension roll as of February 1, 1948. Previously, this minimum pension was granted only to persons retiring after September, 1946, when the minimum was established.

In addition to retroactive pension payments, a monthly increase of $11,600 will be paid the 1,144 pensioners. This raises the total liability to pensioners by approximately $1,387,000.

Under the new revision, a retired employee is granted the minimum of $12 for each year of continuous service prior to September 1, 1946, in addition to any benefits due him through social security payments. Thus, a person who retired after 25 years' service will receive not less than $300 a year plus his social security benefits.

The cost of all pensions attributable to service with the company prior to September 1, 1946, is paid entirely by the company. For all service after that date, the employee and the company jointly contribute, the company paying by far the greater share.

An Engineering and Vocational Training Program

COMPETITION to secure technically trained men is keener today than ever before. To solve its manpower shortage problem, Westinghouse conducts two training programs, one for engineers, another for skilled workers.

In college the student learns the fundamentals of engineering, but he has no real certainty which branch he is best fitted for—sales, design, or manufacturing. In its graduate student course, Westinghouse helps him find out. Every graduate student gets a basic course consisting of orientation, production, test and product conference assignments. After completing this basic work, the men are assigned to sales engineering or manufacturing, where they receive specialized training. For about eight weeks, the student in the graduate course studies manufacturing problems; the study of products continues in a full-time engineering school for eight more weeks. Some students then go into technical departments of the company. Others, selected by competitive examination, enter a third course of instruction in the mechanical design school. After this, student engineers get office assignments. Meanwhile, through periodical conferences with officials, students are classified for particular engineering activities. Conferences then are arranged with the heads of various engineering departments, and the students are transferred to regular jobs.

For those without a college background, Westinghouse offers similar opportunities for advancement—in its apprentice training program. There is a wide variety of trades from which the mechanically inclined high-school graduate can select. Most courses cover four years, others two years. The apprentice works on a 40-hour week basis. Four of those hours he attends class. The other 36 hours he spends on the job in the training section set aside for apprentices. He stays there from one to two years, depending upon his course of training, and then is transferred to a regular section of the plant where he works on a normal schedule, still attending school. At the completion of his apprenticeship, he is graduated and awarded a journeyman's certificate.

—*American Business* 10/47

Training for Group Development

THE Second National Training Laboratory in Group Development, sponsored by the National Education Association and the Research Center for Group Dynamics with the cooperation of several universities, will be held at Gould Academy, Bethel, Me., from June 14 to July 3. This laboratory offers an opportunity for action leaders, educators, and social scientists to cooperate in an experimental approach to problems of training and action research. Basic skills of human relations and techniques of stimulating group growth and productivity will be analyzed, tested, and practiced.

Delegates are being selected from among administrators, supervisors, trainers, consultants in social science, counselors, teachers, and organizational leaders in the fields of education, industry, government, labor, agriculture, community work, social welfare, etc. For further information, address Leland P. Bradford, Division of Adult Education Services, National Education Association, 1201 Sixteenth Street, N.W., Washington 6, D. C.

• FIRMS STOP SHOVING FOR COLLEGE MEN: While the supply continues at record levels, the college graduate market is bullish only in the sales and accounting fields. A "general decrease" is reported by Frank S. Endicott, Northwestern University director of placement, on the basis of a survey of 127 companies. The companies were mainly large and medium-sized firms that actively recruit graduating seniors. The companies hired 5,621 inexperienced college graduates last year and plan to hire 5,451 this year. The demand for engineering men declined to 1,548 from 1,728. Last year, 58 of the companies hired 1,231 graduates as salesmen; for 1948, 52 firms want 1,589.

—*What's New in Management* (Key Personnel Counsel) 3/48

PRODUCTION MANAGEMENT...

How to Beat Those Climbing Freight Rates

ANTICIPATING another thumping increase in rail freight rates, industrial traffic managers are wielding pruning shears on all transportation expenses in cooperation with other top executives. A dollar saved by better routing, swifter unloading, or sturdier packing is a dollar earned.

There are many specific, sure-fire methods of minimizing cost factors in transportation. But underlying these methods is one cardinal principle—combined operations on the part of the management team. President, purchasing agent, production chief, sales manager, and other key men must add their weight to the traffic director's to hold the lid down on transport costs today.

To help the management team, the following check list pinpoints several ways to save:

1. Is an up-to-date tariff file maintained? An all-carrier tariff file makes possible selection of lowest rates for incoming raw materials and outgoing finished products.
2. Does purchasing agent check freight costs? Often, a low bid from a supplier located at the other end of a long haul will prove expensive in the long run.
3. Do purchase orders carry shipping instructions? Purchaser should select the best route; determine arrival date; synchronize production schedule accordingly.
4. Does receiving-checker note and report damage immediately?
5. Are suppliers notified about damages?
6. Are freight bills audited before payment?
7. Are l.c.l. lots consolidated? Carload shipments cost less. Shippers who can't load full cars can use a freight forwarder; split the difference between carload and l.c.l. rate.
8. Is plant space reserved for incoming freight?
9. Are truck shipments scheduled properly so that loading crews will be busy all day, not idle half the time and swamped the other half?
10. Is materials-handling equipment used?
11. Are shipping cartons light but strong?
12. Are shipping containers pilferproof?

Proper scheduling saves dollars.

The truck jam-up situation is avoided by Devoe & Raynolds Company, New York, by spacing shipments through the day. Peaks of rush activity and valleys of idleness are leveled off into constant and economical flow of materials.

Devoe's traffic department stretches transportation dollars by making certain that both trucks and railroad cars are loaded to full minimum weights. Whether to ship by truck or rail is influenced by a continuous comparative-rate check.

If common-carrier rates boost expenses too high, a company may find it pays to buy or rent a fleet of highway vehicles.

Shipping fully loaded freight cars is important, but it is only half the cost battle. Plants must make certain that each full freight car contains a maximum of merchandise and a minimum of packaging materials.

Shippers should be able to answer "Yes" to the following questions posed by the general traffic manager of the Borden Company:

"Do packages permit the highest ratio of net weight to gross weight and still afford safe transportation and sales appeal?

"Are the packages so designed that storage and other space is efficiently utilized and handling costs reduced to a minimum?"

An affirmative reply comes from Sunroc Refrigeration Company, Glen Riddle, Penna. Sunroc ships water coolers by rail, truck, and water. Formerly, the product was packed in a wooden crate. This was changed to corrugated shipping containers, and a cost study was made to test the new method. Important savings occurred all along the line. Results included a 40 per cent reduction of initial cost; a 30-lb. drop in the weight of each packaged unit; and a 20 per cent reduction in size. In addition, box setup and packing time were cut 50 per cent.

Now Sunroc loads a car in 50 per cent less time, and gains a 40 per cent saving in shipping space. (A boxcar holds 130 coolers in corrugated cartons, against 80 in the old crates.) The new container has been well received by dealers, because they, too, save money when reshipping to customers.

Numerous plants nip transportation costs by improved packing or physical handling of the product. Others win part of the game even before the kickoff by locating plants in accordance with prefigured rate structures.

Of the 125 factors considered by Pennsylvania Railroad's industrial department when advising plant location, many deal with making freight bills as painless as possible. One point is the location of a plant where transit privileges exist, or where they may be established.

Transit privileges are accorded by the railroads to commodities while in transit from point of origin to destination. They are a departure from the usual and ordinary transportation service, and must be approved by the ICC.

A simple instance of transit privilege is provided by Washburn-Wilson Seed Company, Moscow, Idaho. The company has a plant at Horseheads, N. Y., where products sent from Michigan, Idaho, and Wyoming are repacked in cellophane wrappers, to be sent to consumers in New York, Philadelphia, Baltimore, and Washington.

Instead of paying the freight rate on the products from Idaho to Horseheads and then from Horseheads to Baltimore, Washburn-Wilson pays the direct rate from Idaho to Baltimore, plus a small transit charge for the stopover at Horseheads. The direct rate plus the transit charge is much less than the indirect rate would be. Transit privileges, and most other methods of beating climbing freight rates, are well within the reach of small and medium-size, as well as large, plants.

Modern Industry, December 15, 1947, p. 50:5.

Walkie-Talkie Inventory Cuts Shutdown Time

WHEN a plant halts operations for inventory, how much does the wasted production time cost? About $50,000 for Barrett-Cravens Co.

Eventually, thanks to a new inventory technique, this Chicago materials-handling firm expects to save this sum annually. The improved method combines wire recorders with punched-card tabulating equipment. Inventory clerks are equipped with wire recorders instead of tally sheets, calling off stock information into their microphones. Plant downtime has been reduced 50 per cent in comparison with former years.

—*Modern Industry* 3/15/48

Determining Reliable Delay Allowances

By ADAM ABRUZZI

MOST industrial analysts agree that the practice of setting up delay allowances on a subjective basis can seriously affect the usefulness of the time-study estimates to which they are added. To illustrate, the error contained in an arbitrary allowance value of 20 per cent, for example, may be large enough to make the final result unreliable. In any event, the accuracy with which the time-study observations are taken is largely wasted.

With these facts in mind, important units of the British cotton industry made an intensive study of the problem, which culminated with the publication of a detailed survey by Tippett.[1] Because it has since been recognized as an important innovation in time-study work, the principal features of this study should be reviewed briefly.

The planning phase of the study had two major objectives—attaining the required degree of sensitivity and taking into account the principal sources of error. After the appropriate analytical plan had been worked out, observations were made on a related group of weaving and spinning operations in a number of cotton mills. Unlike standard time-study work, however, the observers were only required to determine whether the machines were active or idle and report the causes of idleness. When the required number of observations had been collected, the ratios of the delays attributed to different causes were computed for direct use in setting up delay allowances.

APPLICATIONS AND GENERAL ADVANTAGES

In recent years, Tippett's basic method of making spot observations has been used to obtain reliable estimates of machine and man delay ratios for diversified operations in representative industries.[2] That it can also profitably be used in other significant plant problems is demonstrated by its successful application to toolroom and materials handling work.[3]

Some of the major advantages reported as a result of these applications should be enumerated. First, Tippett's method is considerably less expensive and requires much less time than do the corresponding "interruption" studies now in general use. And because they require little technical ability and do not involve subjective judgments, spot observations can be made by relatively unskilled observers. Among its other advantages, a spot observation study can be interrupted without affecting its reliability. Moreover, an observer can readily obtain data for several studies during one observation tour.

On the important question of worker reaction, two essential points have been established. The fact that observations are random, non-continuous, and do not require the use of a stop watch has made workers generally receptive to the Tippett method. The random nature of the observations also helps to prevent errors caused by nervousness and other personal factors.

A CONTROL CHART PLAN

One of the principal limitations of the Tippett method is the statistical sophistication required to carry out the analytical procedures. That limitation can be overcome, however, by using the

[1] "A Snap-Reading Method of Making Time-Studies of Machines and Operatives in Factory Surveys" (*Journal of the Textile Institute*, February, 1935).

[2] Morrow—*Time Study and Motion Economy* (Ronald Press, New York, 1946).

[3] Schaeffer—"Observation Ratios" (*Factory Management and Maintenance*, July, 1941).

related and comparatively straightforward fraction defective control chart procedure. It may be added that this procedure is used extensively in product quality control work when the observations, as in the delay problem, are made in terms of percentages or fractions.[4]

For the purpose of demonstration, three assumptions are made in the following hypothetical example. It is assumed first that an estimate is required of the delay ratio for a battery of machines. The other assumptions are that the average delay ratio reported for machines of the same general class performing similar operations is 20 per cent and that the final estimate has to be defined within ± 3 per cent.

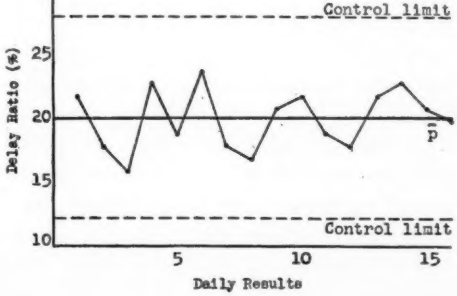
These values are then substituted in a standard formula, from which the required number of observations is estimated to be 1,600. In more general terms, the required number of observations depends on two factors, the advance estimate of the delay ratio and the required degree of precision. Thus the number of observations in the present example would be smaller if it had been necessary to define the final estimate only within ± 5 per cent instead of within ± 3 per cent. Similarly, 900 observations would have given equally precise results if the advance estimate of the delay ratio had been 10 per cent instead of 20 per cent. It should be added that it is quite often wise to plan on taking more observations than are estimated to be necessary, as the observed delay ratio may turn out to be somewhat greater than the advance estimate.

To return to the example, the requirement that the observations be representative is met by scheduling them to cover all the significant operating factors, such as different materials, periods, days, and operators. The observations must, however, be made in a random manner to prevent systematic errors like those caused by anticipation on the part of operators.

ANALYZING THE RESULTS

To summarize the analytical phase of the study, the additional assumption is made that an observer actually took 100 spot observations under the prescribed conditions on 16 successive days to make up the required total of 1,600. The number of times the machines were idle was then divided by the total number of observations for each of the 16 days to obtain the hypothetical sample points plotted on the chart. Standard control chart procedures are then applied to the results to obtain the central value and the control limits shown on the chart.[5]

An examination of the chart brings out a conclusion of the utmost practical importance. All the plotted points lie inside of the control limits, which means that they can be considered to meet the criterion of statistical control and that the over-all observed average or $\bar{p}$ of 20.2 per cent is a reliable estimate of the delay ratio. It is pertinent to add



[4] *Cf.* "Guide for Quality Control" and "Control Chart Method of Analyzing Data" (American Standards Asociation, 1941-1942), which also gives most of the required estimating formulas.

[5] *Cf.* Abruzzi—"Personnel Records and Statistical Charts" (PERSONNEL, July, 1947), which discusses the function and meaning of control charts and their limits in some detail.

that unless all such plotted values meet the criterion of statistical control (*i.e.*, lie inside of the control limits), the use of the over-all observed average as an estimate is unreliable and may result in costly and inequitable delay allowances.

Inasmuch as the over-all observed average is a reliable estimate in the present problem, the limits of error can reasonably be computed at this point. With the aid of another standard control chart formula,[6] the final limits of error are in this case estimated to be 23.2 per cent and 17.2 per cent (20.2 per cent ± 3 per cent), which verifies the fact that the original precision requirement is satisfied by the study.

To summarize, the control chart shows that the best estimate of the true delay ratio of the battery of machines is 20.2 per cent. In addition, the limits of error show that it is highly improbable that the true delay ratio is greater than 23.2 per cent or smaller than 17.2 per cent. With these values, the delay allowance can be set up with confidence in its reliability and long-range usefulness.

ADVANTAGES OF THE CONTROL CHART METHOD

As the preceding discussion implies, the chief advantage of using the control chart method in delay studies is that it is the most economical and effective method of obtaining reliable delay ratio estimates and their limits of error. As a result of its control limits, moreover, this method has some unique practical advantages. Thus it leads to the detection of significant and identifiable variations between, for example, the delay ratios reported for different days. In that way, the control chart provides effective guides to corrective action and makes it possible to maintain the total delay ratio at a consistent and economical operating level.

To elaborate on this point, a reading of 30.0 per cent in the hypothetical example would have fallen above the upper control limit. It would therefore be considered to be the result of a significant and undesirable cause of variation like poor tools or coolants, which would be investigated, identified, and corrected in actual practice.

When a reading falls below the lower control limit, an investigation would again be justified, but for a different reason. Since the cause is under these conditions usually found to be a positive factor like improved materials, it is often advisable to identify and incorporate that factor into the standard operating procedure in order to reduce the over-all delay ratio.

The control chart has an additional and important advantage in that the effect of a change in operating conditions can be checked to determine whether it produces a significant change in the delay ratio. If a new method of feeding material to the machines, for example, were to be adopted six months after the completion of a control chart study like that illustrated above, a new sample of 100 observations could as before be taken in the course of a day's operation. Its results could then be evaluated against the chart limits to verify the current validity of the basic delay ratio.

CONCLUSION

Though daily results are generally useful, it should be pointed out that a delay ratio control chart can be set up and analyzed on any other sample

[6] *Cf.* footnote 4 as well as other standard control chart references, such as Simon—"An Engineers' Manual of Statistical Methods" (Wiley, 1941).

base that seems appropriate. If significant changes are more likely to occur between periods, for example, the required number of observations would be plotted by periods and analyzed by the same basic method.

As might be expected, similar control chart studies can be used in exactly the same way to derive reliable estimates of man delay ratios and their limits of error in addition to the ratios of delays caused by specific factors like waiting for work or inspecting parts. In fact, all these estimates can be obtained from one set of observations by instructing the observer to report the causes of all the delays that he observes.

Mechanization in the Land of Cotton

MECHANIZATION is cutting fabulous swaths in cost of labor and production in the realm of King Cotton. Some farms have been mechanized to such an extent that no hand labor is needed from planting to harvesting time.

Labor time necessary to turn out a crop has been reduced to as low as 20 hours an acre in the coastal plains of North Carolina, as against the present general average of 118 hours. In the Mississippi delta belt, machines have cut the time from 141 hours to 23 hours. On the highly mechanized plains of Texas, the labor cut has been from 22 hours to seven hours.

Clifton Kirkpatrick, of the National Cotton Council, interprets mechanization as use of machinery not alone in picking cotton but also in chemical control of weeds, the use of insecticides, flame throwers and fertilizers. According to Mr. Kirkpatrick, chemical weed control alone can cut a third off the hours needed to produce a crop. Insects account for an annual loss of $283 million; in the most recent crop year, they ate through a million and a half bales and raised the average cost of production 5.8 cents a pound. This loss, too, can be cut through mechanization.

Mechanical strippers, which are used on arid land, were employed to bring in about 125,000 bales in Oklahoma and Texas. Another 75,000 bales were handled by a spindle-type picker (useful in rainier climates) in the Mississippi delta region. Great gains in the production of both types of machines were made last year. International Harvester at a new Memphis plant is now turning out a close-to-capacity 1,500 pickers a year; Allis Chalmers and Deere & Company are also ahead of last year's output.

—*The Wall Street Journal* 4/2/48

Novel Stunt Emphasizes Economy

LEPRECHAUNS, Gremlins, Elves, and Sprites turned a fire drill into a near-riot at the W. J. Voit Rubber Corporation. At the clang of the alarm, 500 employees marched out of the plant in orderly fashion. Six minutes later the bell clanged again and they all marched back.

Then pandemonium broke loose. From every crypt, corner, and cranny of the building tumbled a profusion of pennies. Pennies turned up in the molds, machinery, assembly lines, chutes, packing cases, scales, desks, papers, and in every obscure and surprising place in the large three-story Voit factory.

No explanation for the phenomenon was offered the employees by the company, but a company spokesman reported that the penny hunt was the beginning of a campaign to prevent waste. "We are going to demonstrate," said Page Parker, vice president in charge of production, "that a couple of million pennies can be saved each year by each worker's more effective use of his time and materials. Most of the thousands of dollars we can save are lying right under our noses."

—*American Business* 12/47

MARKETING MANAGEMENT...

The Challenge of the Expanded Market

"OF all the economics that I know, I believe that I am most profoundly conscious of the economics of the man who eats in the kitchen. The prevailing hope of this man is that his children will inherit the comfort of a spic-and-span dining room. Upon the productive efforts, the fighting efforts, and the future thinking of this man of the rolled-up sleeves depends, I believe, the economic freedom of the world."

That comment was made some two years ago by William M. Jeffers, then president of the Union Pacific Railroad.

It is pertinent today because it is by looking at the economics of "the man with the rolled-up sleeves" that industry can determine the actual potentialities of the 1948 market.

Just what has been happening, and what is the importance of the man with the rolled-up sleeves?

One generation has seen an economic and social evolution in America. Let us see what has happened from 1910 to 1947.

In 1910 there were slightly more than 20,000,000 families in the United States. Today there are about 38,500,000. The number of families has increased 91 per cent in these 37 years.

But while the number of families has nearly doubled, the annual income in the United States has increased 529 per cent, from 28.16 billion to approximately 177 billion. Our national income is six times as great as it was in 1910.

Business has generally come to recognize, according to statements its spokesmen have made of late, that the great market for most of our products must be in the so-called middle-income group—that is, families receiving from $2,000 to $5,000 a year. That bottom figure works out at approximately $40 a week.

Even in the boom year of 1929, six out of 10 families in this country had incomes of less than $40 a week. At the beginning of prewar 1939, seven out of 10 families had weekly incomes of less than $40. At the present time only four out of 10 families are in that situation, for approximately six out of 10 families have incomes of more than $2,000 annually.

What sort of families are the 58.5 per cent who today have incomes of over $2,000 a year? Of all those families, six out of 10 are the families of wage earners.

Let us look at the picture in total dollars. For an average week in January of 1947, the total earnings of all white-collar workers in the United States were $760,000,000. The total earnings of all wage earners were $1,265,000,000, or nearly twice as much.

These figures of weekly earnings are related to the great increase in employment. From March, 1940, to March, 1947, the total civilian labor force increased nearly five and one-half million in numbers, but the number employed increased 11 million. In 1940, the percentage of the labor force which was actually employed was about 85 per cent. At the peak of the war production in 1944, the labor force was 98.2 per cent employed. Most recently, the proportion of employment was 96.1 per cent.

However, there are today five and one-half million more persons actually working now than at the peak of war production in 1944.

With all these persons working and with the increases in payments to them, there has naturally been a tremendous growth, not only in the percentage of total national income payments which has gone into salaries and wages, but also in the total itself. In other words, greater shares of greater sums have been spread among more and more persons who can be customers.

Are they customers? In 1939, expenditures for consumer goods were $61.7 billion. In 1946, they were $127.2 billion—more than twice as much. It is significant to note here that though the percentage of total income payments which went into consumer goods expenditures decreased from 87.1 per cent to 77.0 per cent, in dollars they increased by $65.5 billion—which indicates that people have had more savings and have put more into taxes as well.

Many people seem to think that the current high prices absorb the income gains of all, as they have of so many members of the white-collar group. The most significant comparison in that respect which we can make is perhaps in its relation to the income of the wage earner.

Average weekly earnings of wage earners in industry are currently almost twice what they were in 1939. The average in 1939 was $27.04. In the first quarter of 1941, it was $51.93. The cost-of-living index in 1939 was 99.4; it is now 154.3.

The cost-of-living index has gone up 55.2 per cent, but the average weekly earnings of workers in industry have gone up 92.1 per cent.

What does that mean in actual living costs to the average worker? To earn enough money to buy one gallon of standard grade gasoline in 1939, he had to work 18 minutes; now he buys it with 12 minutes' work. It is true that his shoes have gone up more than most things; in fact it costs about 80 per cent more to get a decent pair of work shoes. However, it takes him seven minutes less to earn a pair today than it did in 1939. The 24-ounce package of granulated soap which his wife wants costs 37½ per cent more, but it takes him only 17 minutes of work to earn it now as against 23 minutes in 1939. And so it goes through the list of the necessities and some of the luxuries of life.

Even the fact that automobile prices have gone up more than 70 per cent does not change the picture. To buy a Ford four-door sedan in 1939, at the 1939 price, the wage earner had to work 166⅞ eight-hour days. Today he earns it at the present higher price in 155 eight-hour days.

Actually the discretionary spending power, or "loose money," of industrial wage earners has increased more than has that of any other group. This is the money left after the basic essential expenditures for food, clothing, shelter, taxes, medical care, and other such charges. The index of discretionary spending power, or "loose money," measured from a 1935 base, stands currently at 254 for all non-agricultural families (including white-collar, wage earners, executives, proprietors and the rest). But for the industrial wage earners alone it is 368.

Let us put that into total dollars. Figuring at the rate for the first quarter of 1947, the total current annual discretionary spending power or "loose money" of wage earners is $25.6 billion. For those not in the wage-earner category, it is $13.3 billion.

Those are briefly the changes of the past generation, and particularly since the prewar years. They dramatically underline the great expansion of the market for the goods and services of our industries. They present a pattern which indicates clearly that the philosophy of defeatism is completely without foundation and that the stage is set for the maintenance and expansion of the greatest selling opportunity this country has ever witnessed.

By Everett R. Smith. *Advertising & Selling,* September, 1947, p. 35:4.

Successful Sales Meetings

THE primary purposes which most sales managers wish to achieve in their sales meetings, judging by responses to a Dartnell survey of 90 representative companies, are threefold: inspiration, information, and the building of more cordial personal relationships.

Early sales meetings were usually concentrated on inspiration—featuring tub-thumping speeches to bring the salesmen to the sinners' bench, vowing reform of their bad habits and increased selling effort. Though this type of motivation is still part of a good sales meeting, today's sales managers are in general agreement that their men are too sophisticated to be much impressed by such an evangelistic approach.

Indicative of the change of emphasis is the Silex Company's program. This firm's annual meeting includes one session at which all the big brass leaves the room, while the salesmen themselves judge the validity of individual gripes. One man from headquarters remains in the meeting, empowered in advance to promise action on any problem which the men agree needs solution.

The sales meeting is used to get information to the salesmen on company policies, products, advertising plans, new sales promotional materials. Many companies use this time to give their men a brief refresher course on fundamentals of selling. The Miami Margarine Company, for example, which shows each year a series of sound-slide films, reports that the men are enthusiastic about this part of the program even after several showings; because the pictures always give them a few new points to think about. In addition, information on general business conditions is becoming part of more and more sales meetings. A Mid-Western glass manufacturer now considers this type of knowledge so important that one full day out of four is devoted to comments on the business outlook and its relation to quotas and potentials for the industry.

The third main function of the meeting is the cementing of personal relationships. The meeting gives the home office management an opportunity to observe their men, gives the men a chance to know the management. New staff personnel have an opportunity to meet the sales force. And the salesmen themselves have a chance to get acquainted. If the salesman for the Boston territory has talked things over with the man from Dallas, the mutual respect resulting is a morale booster all along the line. Many companies make a deliberate effort in this regard; American Viscose, for example, closes its home office so that all staff personnel above the clerical level can attend the meeting; when room

assignments are being made for the salesmen, the men are carefully paired from different parts of the country.

Not all sales managers are convinced of the need for sales meetings. A number of contributors indicated that they thought they could save money and do a far more personalized and effective job with their men by individual conferences. There is a top limit, of course, on the size of a sales staff that can be handled in this way.

Approximately half the companies run their main session annually. But many firms have found it necessary either to bring their men together more frequently or to supplement the annual convention with other meetings of various types. Usually these supplementary meetings are held on a regional basis. Semi-annual meetings are the most popular among the more frequent schedulings; approximately one-fifth of the companies surveyed run two sales sessions a year. Five companies reported holding three major meetings a year; and three said they have quarterly get-togethers. The frequency is of minor importance, but it is significant that nearly one-third of the reporting organizations found these arrangements more valuable than a single big session.

Probably no single industry uses sales meetings so consistently and explores their potentialities so thoroughly as do the insurance companies. Following are some of the highlights of the description given by a representative of Standard Insurance Company of his organization's program:

A. *Agency Meetings.* Held weekly by each manager in his agency office if his men in that office are all working out of that particular branch; otherwise, meetings are held approximately once monthly in the field. These weekly meetings do not cost anything except a breakfast on some special occasion. Subect matter is planned several days ahead. The program normally consists of a session lasting from one to two hours. One-third of the time approximately is used by the manager; one-third by the men in presenting some assigned subject; and one-third for discussion of material presented or matters brought up by the men themselves.

B. *Regional Meetings.* Held approximately every six months. Frequently joint meetings of two or more agencies held at the branch office of one of them or at some other convenient common point. They are planned two or three months ahead and last from one to one and one-half days. Topics are timely ones, selected and assigned in advance. Every salesman is invited to participate in the discussions. A question box is always a feature of these meetings. Cost is around $5 per man, never in excess of $10.

C. *Educational Conferences.* Usually held every two years. They are planned six months in advance and the subject matter carefully selected. Speakers from the sales organization or from the home office are put on the program only in the event they can bring something to the group that is worth hearing. A good forum leader or chairman or both is necessary in order to keep the meeting running on schedule time. Each scheduled speaker is allotted a definite amount of time and told in advance that if he exceeds that allotment he must expect to be asked by the chairman to conclude his remarks in one additional minute.

The following items are among those featured at these meetings: recognition of outstanding performance by individuals; recognition of satisfactory performance by individuals; initiation into honor clubs; special sales techniques presented by outstanding salesmen who have employed them successfully; new ideas that click.

Panel discussions, contests between groups, playlets, skits, and movie presentations permit coverage of a wide field in a comparatively short time.

About half the companies surveyed hold their major sales conference in their home office city.

A number of companies have recently developed programs put on by a traveling crew from headquarters which can fly from one regional meeting to another. The Electric Auto-Lite Company, according to a company spokesman, recently used this technique:

We ran our meetings in each region for all personnel. Usually the sessions lasted

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three days, one on operating procedures, one on advertising, and one for individual interviews. In a nationally operating company, the chance for the salesman to talk with headquarters personnel about personnel or business problems is very important.

Officials of the companies that follow this practice prepare for these meetings by taking with them the complete records of all salesmen in the region. As a result, they are able to offer helpful, concrete suggestions based on the men's own background and experience.

THE DARTNELL CORPORATION, Chicago.

PACKAGING...

Modern Packages Will Increase Your Sales

THE current era is an era of change. It is an era in which forward-looking managements are critically examining their present operations, bringing them into line with the requirements of the days ahead. Particularly in the field of packaging are today's methods getting careful scrutiny, as more and more manufacturers are recognizing the potentialities of the package as an effective seller of the product it contains.

A packaging analysis, to be productive, must take into consideration the many potentialities of the package. The package can educate the consumer about the product it contains. It can facilitate large-scale and profitable factory production. It can protect the quality of the product from point of manufacture to point of consumption. It can maintain the reputation of the company. It can insure present sales and build future sales.

It is vital for top management to recognize the importance of making packaging a job of teamwork by appointing a packaging committee, consisting of major executives representing the sales, advertising, promotion, production, research, legal, shipping, accounting, and purchasing departments. Best results will be accomplished by having a packaging department whose staff, while answerable only to top management, knows the viewpoints of the several operating departments of the business, and reflects them in their studies and recommendations.

The packaging study will be simplified greatly if it is broken down into two phases, namely: (1) structural considerations; and (2) merchandising considerations. Following are a few of the major factors in the former category:

Physical form of product, whether powder, granular, solid, viscous, oily or greasy, liquid; degree of fragility of product.

Protection product will require, such as: moisture-vapor protection; hazards due to light, bacteria, mold, corrosion, humidity changes, sifting, insect infestation, etc.

Styling. New and old styles of packages and packaging materials suit-

able to provide product with adequate protection.

Competition. Kind of packages used by leading competitors.

Most practical package, based on: structural strength; ease of manufacture; availability; adaptability to high-speed mechanized production; proper size and shape for storage, handling, and display; comparison to competitive packages; ready consumer acceptance; and economy.

Following is a check list of some of the most important items to be considered in the second category:

1. Is the package appropriate in form, shape, and texture for the product?
2. Are consumers familiar with this type of package, or will it require "selling" to insure acceptance of it?
3. Is the package of the proper size and shape for convenience of the wholesalers and retailers?
4. Is the unit package the proper size to fit in with consumer buying habits?
5. Does the package permit the consumer to examine the product prior to purchase without marring its appearance and serviceability?
6. If contents are not to be completely used at one time, can the package be reclosed easily and effectively?
7. Is access to the product within the package easy, so that any given portion may be removed without waste?
8. Is the package appropriate for storage in the consumer's bathroom cabinet, linen closet, pantry, refrigerator, or other usual place of storage?
9. Does the package unmistakably identify the contents by trade brand and product name?
10. Are illustrations used which attract, interest, and demonstrate what the product will do for the consumer?
11. Does the package clearly indicate the advantages of the product and inform the consumer how to use it correctly?
12. Are the colors and design in good taste, reflecting the integrity of the manufacturer and pleasing to the consumer?

Concurrent with such a factual analysis of the package is one directed at the constant need of getting products and packages out in plain sight in retail stores, where they may be seen, wanted, and bought. Specifically this seeks improvement in:

1. Individual packages to serve as effective displays in their own right.
2. Multi-unit containers serving as protective shippers but more particularly as sales-stimulating point-of-sales displays.
3. Outright display fixtures and devices, with the package given its proper place and prominence as the main feature in the display.

The increasing popularity of self-service retailing gives still further reasons for designing every package to act as a salesman in its own right. In fact, as the "battle of the brands" increases in supermarkets and other self-service stores, this consideration will probably force revolutionary changes in the packaging of many everyday food items, and other products, designed to equip them to do a successful self-selling job.

Over the years, many managements allow themselves to become bound by iron traditions. Charles Kettering of General Motors aptly indicated the fallacious reasoning that underlies this tendency of management when he said: "The price of progress is the risk of change." *Now* is the time for manufacturers to re-examine their packaging methods and to make the indicated changes—even changes that seem revolutionary in nature and are decided departures from past practice.

From an address by Willard F. Deveneau at the Annual Meeting of the Association of American Soap & Glycerine Producers, Inc., New York, 1948.

FINANCIAL MANAGEMENT...

The Shortage of Venture Capital

OBSERVERS of the security markets have for some time been noting a large shortage of venture capital. The National Association of Manufacturers estimates the current deficiency at $8 billion annually and points out that commercial bank loans rose rapidly in 1946 and 1947, while individual holdings of corporate securities showed no increase whatever, indicating that business concerns were forced to resort to commercial banks to meet some capital requirements that should have been financed by the sale of securities to investors. The New York Stock Exchange calculates that in no year since 1935 has as much as 12 per cent of total corporate expenditure for new plant and equipment been financed by stock issues. The proportion for the entire period 1936-1947, inclusive, is less than 6.2 per cent.

It is generally agreed that the country is now facing a period of large and sustained demand for new capital to supply the needs of a growing population, replace worn-out and obsolete plant and equipment, and give effect to technological improvements. Thus, the time has come when the problem of venture capital must be faced frankly and constructively dealt with if our economy is to expand and thrive.

The larger capital requirements of the last two years have been met to a considerable extent by the use of liquid assets that business concerns accumulated during the war. Corporate holdings of cash, government securities and receivables from the government are estimated to have increased from $13.1 billion at the end of 1939 to $47.9 billion at the end of 1944. Since the latter date, they have been declining. By the end of 1946, they had been reduced to $37.5 billion. Latest reports indicate that a further decline to about $35 billion occurred in 1947 but that the ratio of liquid funds to sales, which is regarded by the Securities and Exchange Commission as a rough measure of liquidity, is still somewhat above prewar levels. Obviously, the process of drawing upon liquid funds cannot continue much longer without impairment of liquidity beyond the point of safety.

Another important method of obtaining new capital is by the reinvestment of current corporate earnings. American corporations are estimated to have earned $17.4 billion, after taxes, in 1947. Of this total, only $6.8 billion, or 39 per cent, was distributed as dividends, leaving $10.6 billion for reinvestment, of which $5.7 billion represented the rise in inventory values due to higher prices.

With personal saving last year estimated at $10.9 billion, it appears that a total amount of $21.5 billion was provided by private saving, personal and corporate. To this must be added federal, state, and local governmental surpluses of $12.9 billion, representing funds collected but not spent, and either returned to the private economy through debt retirement or available for return by debt retirement or governmental expenditure. These figures indicate an imposing volume of savings, though the amount does not appear un-

duly large in view of the huge capital deficiency accumulated since 1930.

Conditions in the capital market, however, cannot be adequately described in terms of over-all saving and investment. Whether total saving, over a period of years, will be sufficient to provide for the capital requirements of business is a question on which competent opinion differs. But there can be little doubt that, unless a broad reversal of some of the trends of recent years takes place, the supply of venture capital in the form of demand for common stock and of funds for investment in unincorporated business is likely to be grossly inadequate.

The situation appears to be attributable to numerous causes. One of these is the heavy tax burden that has been laid on individual incomes, especially those in the higher brackets, which, it is generally agreed, are the principal source of the savings that normally supply the great bulk of venture capital. The almost confiscatory rates on large incomes leave relatively little surplus for investment in equity securities and little incentive to assume the risk that such investment necessarily involves. The situation is aggravated by the estate taxes, which further weaken the incentive to risk-taking investment and which depress the market for equity securities both by forcing hasty liquidation and by breaking up large estates into smaller units for which such securities represent a less suitable form of investment. The double taxation of dividends is without theoretical justification and is certainly harmful in its practical effects. Though the law makes a distinction in favor of income derived from capital gains, this partial exemption appears insufficient to induce an adequate amount of risk-taking investment.

The long-term outlook for business concerns has been weakened by tax laws and by high and inflexible costs. Tax rates on corporations represent a strong deterrent to expansion, especially that of the more venturesome sort. Changes in the price structure have been such as to narrow the margin between raw-material costs and selling prices. Wage costs have risen sharply and have become more inflexible, creating a situation that is not a serious handicap to most divisions of industry as long as production, employment, and prices remain at high levels but that could become a heavy burden in the event of a general decline in the volume of activity and the price level. The rising "break-even" point for industry—that is, the level of activity that marks the dividing line between profit and loss—has become an object of increasing concern.

International affairs also have played an important part in creating the present situation in the market for venture capital. The unsatisfactory state of international relations is necessarily a major unsettling factor in the domestic business outlook; and the urgent need for American goods and American dollars abroad has resulted in the liquidation of some domestic securities owned by foreigners, with a depressing effect on the market. If the European Recovery Program is enacted and proves successful in achieving its objectives, its effects should be helpful, both psychologically and otherwise.

In the long run, an inadequate supply of equity capital must inhibit industrial expansion, limit employment opportunities, and weaken the financial position of business concerns and their ability to weather the varying economic climate that the passage of time will inevitably bring. If free enterprise in

America is to expand and progress in the future as it has done in the past, our laws and regulations must be so revised as to restore to risk-takers the means and the incentives to resume their essential role in our economy.

The Guaranty Survey, March 31, 1948, p. 1:4.

Annual Reports in the Employee Publication

THERE are three major reasons why management should approve the use of the annual report as an editorial subject in the employee publication:

1. The accounting financial jargon of the stereotyped report needs to be interpreted in simplified, understandable language.

"Public opinion surveys show that the American public, as a whole, is not opposed to the 'profit' system," says Don Knowlton, Partner, Hill & Knowlton, "The trouble has been that management has, with only a few exceptions, presented this system under a terminology which the public could seldom understand and, egged on by opposition criticism, has thoroughly misunderstood." *

2. It is wise to prevent deliberate misinterpretation of financial facts by persons who may seek to use such misinterpretation to their own advantage.

Ernest T. Weir, Chairman, National Steel Corporation, says: "In a current pamphlet of the United Steelworkers of America, the steel industry is accused of war profiteering. It is charged . . . the industry has made 'enormous profits,' part of which have been reported publicly and part of which have been 'hidden.' . . . A person who relied on this pamphlet for knowledge of the steel industry's financial operations would have a highly misleading picture, as anyone can prove to his own satisfaction by using simple arithmetic and common sense."**

3. The level of intelligence of the average employee coincides with that of the average stockholder.

Commenting on the high educational level of the bulk of workers in industry today, Weston Smith, vice president and business editor of *Financial World,* says, ". . . the same corporation annual report should be sent to both the stockholders and the employees."

Presented below are some case histories that indicate how the annual report has been handled by various employee publication editors.

Shell News (Shell Oil Company, New York).—The editors have devoted the entire April, 1947, issue to a report on past operations and future expectations of the company. The four center pages of the 32-page magazine are devoted to a graphic presentation of the financial report titled, "Let's Look at the Ledger." The financial-accounting jargon is relieved by such phrases as "We Own" for assets and "We Owe" for liabilities. The net worth of the company is shown by subtracting all assets from actual liabilities

* See: "The Semantics of Financial Reports," The Management Review, July, 1946, pp. 298-300.

** See: *Simple Arithmetic and Common Sense,* a report by the National Steel Corporation to its employees.

and heading the resultant figure, "Accumulated Earnings Invested in the Business." The Income Statement is also simplified by using such easily understood terms as, "What Came In, What Went Out, What Was Left Over" and "Divided as Follows." A liberal use of color and artists' sketches to brighten and clarify the component parts of the statement complete the coverage. The entire presentation is effective because the past and future of the company is covered in interesting detail by illustrated feature articles, and the financial statement is interpreted with brevity and clearness.

Shop News (York Corporation, York, Penna.).—The editor used a four-page insert in his 12-page tabloid newspaper to tell the story of the company's financial operations. Titled "*Shop News* Report to the Men and Women of York Corporation," the insert is a composite of text and cartoon illustrations. The financial statement is headed, "What the Books Showed" and is formally treated. Interesting highlights include, "Who Gets What?", which shows the respective take by the three groups, employees, officers and directors, and stockholders. "What Does Management Cost?" translates total management cost into a "cents per day" figure for each employee. "York Has $4,098 Invested in You" makes the total plant and equipment investment of the company meaningful to each employee. The company's growth, share in the market and other facts also are portrayed clearly. The York presentation is effective because of its frankness and down-to-earth reporting. The brief text and humorous cartoons make it readily understandable.

Warner News (Warner Company, Philadelphia).—Editor Amy I. Hardester has used two pages of her 12-page magazine to bring financial information to the employees. The first page (inside front cover) is headed, "Financial Statement to Employees." It is a resumé of the company operations for the previous year and a glance at the future, signed by President Charles Warner. The clarity of the message is typified by the following excerpt: "Out of our profit of $1,389,000 . . . we have paid as dividends to our stockholders, *for the rental of plants and equipment,* the sum of $285,000 or about 2.5 per cent of our total sales for the year." (Italics added.) This explanation of "dividends" reduces the financial lingo to plain talk. The second page is taken up with the financial statement, clarified by these headings, "We Took In During 1946, We Received from Others" and "We Paid Out or Set Aside." The distribution of the Warner income dollar is illustrated by stacked coins representing percentages paid out.

Thus, representative employee publications have explained the annual report to their readers. Space devoted to this subject has varied from two pages to a complete 32-page issue. Companies represented have ranged in size from modest local firms to nationally-known giants. Editorial treatment has been heavy through medium to light. Illustrations to interpret the text have been scanty or profuse, in one or more colors. From all this diversified treatment of the same topic, one common and positive fact emerges: The employee publication is a flexible and effective medium for distributing financial information to employees—and has been recognized as such by progressive management.

By Robert D. Breth. *Quotes Ending,* June, 1947, p. 1:4.

Statistical Data on Approved Pension and Profit-Sharing Plans

1. During the latter part of last year the Bureau of Internal Revenue released some interesting statistics on pension and profit-sharing plans approved through August 31, 1946. The data cover 9,370 plans, representing 6,862 pension and 2,508 profit-sharing plans. Participating employees, as of the date information was submitted to the Bureau, totaled 3,657,271, and the annual rate of employer contributions amounted to approximately $757,659,000.

2. The number of approved plans has, of course, increased since this report was issued. The Bureau indicates that up to July 1, 1947, more than 1,000 additional plans had been approved, and it is safe to assume that several hundred more were adopted during the latter half of the year.

3. Although the Bureau statistics cover both pension and profit-sharing plans, we have rearranged the data in the accompanying table to point out what we believe are significant trends in pension plans.

(1) *Period in Which Plan Became Effective*	(2) *Number of Plans*	(3) *Average Number of Employees of Employer*	(4) *Average Number of Participating Employees*	(5) *Column (4) As % of Column (3)*	(6) *Annual Employer Cost*	(7) *Column (6) As % of Annual Payroll of Participants*
Prior to 1930...	105	17,086	13,278	77.7%	$124,174,000	3.9%
1930 to 1939....	517	2,529	1,026	40.6	116,789,000	6.7
1-1-40 to 9-1-42..	843	2,558	534	20.9	82,610,000	5.9
9-2-42 to 12-31-44	4,208	851	170	20.0	221,708,000	10.3
1945 and 1946...	1,189	695	169	24.3	107,939,000	17.3
Total	6,862				$653,220,000	

4. It is apparent, from Column (3), that the larger employing units were the first to adopt funded retirement plans and that middle-sized employers are now using this procedure to solve their retirement problems. It is also interesting to note that, although less than 10 per cent of the analyzed plans were effective prior to 1940, they include almost 60 per cent of the total participating employees.

5. Column (5) presents a noteworthy contrast in the percentage of employee participation in plans adopted before and after 1940. The enormous wartime expansion of employment, with anticipated future contraction, suggested the wisdom of restricting the eligibility requirements for participation in retirement plans, and relatively higher age and service requirements became common provisions of new plans. However, it is reasonable to expect the percentage of participation to increase in the future: first, because employers are beginning to realize that broader coverage is desirable if their plans are to be wholly effective; and, secondly, as employment becomes stabilized, a larger percentage of employees will be able to meet existing requirements.

6. The increasing employer costs, indicated in Column (7), may be explained in part by a significant development in retirement plans. Prior to and during the thirties, retirement plans usually provided only income payments which ceased with the death of the pensioner. Recently adopted plans, on the other hand, frequently provide substantial death benefits prior to retirement and guarantee the payment of income for a specified minimum period, generally 10 years.

—*The TPF & C Letter* (Towers, Perrin, Forster & Crosby, Inc., Philadelphia 7, Penna.) 2/48

AMA SPRING INSURANCE CONFERENCE

The Spring Insurance Conference of the American Management Association will be held on Monday and Tuesday, May 24th and 25th, at the Hotel Ambassador, Atlantic City.

INSURANCE...

Private Pensions Take Hold

PRIVATE pension plans are catching on in industry. More than 7,500 companies have installed paid retirement plans, most of them in the last five years. New plans are being created at the rate of about 70 a month. The growth isn't spectacular but it's steady. *Pension experts say it will step up pressure on non-pensioning employers.*

Existing retirement programs cover some 12,000,000 workers. Companies which sponsor the plans claim greater efficiency, more loyalty, less turnover among employees. They believe the plans are worth the billion dollars annually it now costs to operate them.

Pension advocates argue: A man on wages or salary no longer can provide for his own old age. His ability to save has been greatly reduced. Social Security can't take care of him. Average retirement benefits to man and wife now run under $40 a month, cannot exceed $85.

So, say the pension promoters, the employer must emerge as the principal source for old-age security. Otherwise, he burdens his payroll, clogs promotion channels, stultifies management with over-age deadweights. His only real choice is how and when to accept the responsibility.

For the employer who wants to install a pension plan in his own plant, there are several basic rules:

It must be keyed to long-run financial ability. A plan that fails destroys employee loyalty. Also, unless the Treasury Department can be convinced the plan was started in good faith, its scuttling will bring a retroactive tax bill. Generalizing on pension costs for the employer is dangerous, but most systems run from 5 to 10 per cent of payroll.

It must make retirement attractive. Improved morale and efficiency cannot be expected of men who know they will some day be cut off with a bare subsistence pension. Nor is there much point to a plan which does nothing for a man he couldn't accomplish by himself. A generally accepted goal for total retirement payments is to have them equal 50 per cent of a man's pay. (Social Security benefits are included in the 50 per cent.)

It must conform to tax laws. Specifically, it must not discriminate in favor of top-salaried personnel, and it must be funded in such a way that the company can never make any other use of the money. There was a time when rigged pension plans could serve as tax-dodging devices, but the Internal Revenue Code now has teeth sharpened for such shenanigans.

It must be tailor-made. A steel mill and an advertising agency, to cite extreme examples, are faced with totally different retirement problems. No plan has been devised that fits them both, and none can be.

Beyond these maxims, the employer seeking advice on the whys and wherefores of pension planning will face a diversity of opinion on other basic questions.

Who should be eligible?

Since Social Security benefits are

based on the first $3,000 of annual pay, some pension experts say that private pension payments should begin at that point. Others emphasize that a $3,000 dividing-line normally will exclude 90 per cent of employees and cancel out any morale benefits.

There are tax complications here, too. While the Treasury doesn't call a selective plan discriminatory, it *does* say that benefits to members cannot be proportionately greater than Social Security payments to those excluded. That sets the limit at 30 to 34 per cent of annual pay, a top pension of $3,400 to a $10,000-a-year sales manager.

A company with a $100,000-a-year executive on its payroll has another problem. It can stay inside the Treasury formula and still slip this man a comfortable $34,000 retirement stipend. But such gratuities are a red flag to those in less exalted income brackets. Many companies, therefore, put a ceiling—perhaps $7,500 or $10,000—on retirement payments.

An even more puzzling problem is presented by the 62-year-old $2,400-a-year man, if there are enough of him on the payroll at the time the plan is installed. Obviously, if such a man is to get more than pocket change, his pension must be based on the years he has already worked, as well as on his possible future service. This means whopping company contributions for past-service benefits.

What should be the retirement age?

Most plans set 65, some set 60 for women, a very few 60 for all. This is an important consideration, for a pension at 60 is half again as expensive to the employer as one at 65.

Which should be fixed in advance, the company contribution or the pension?

An employer can budget his costs more easily if the contribution is fixed, but, to the employee, that amounts to letting the tail wag the dog. The employee wants to know *exactly* what he can look forward to. If he has to guess about it, or worry, his boss loses half the psychological benefit of pensioning. So most plans being adopted today fix the pension first.

Should employees contribute also?

Prewar, most pension plans called for some contribution by the employees. But the trend is toward non-contribution. Of the plans begun from 1942 through 1946, three out of four were wholly company-financed.

All experts, however, advise the employer to look carefully at profit expectations before playing Mr. Bountiful. A non-contributory plan, once launched, is hard to change without incurring employee ill-will.

Should employees receive benefits provided by company contributions if they leave before retirement age?

The experts say *yes,* but only after employees have had some years of service. If a company wants to hold its people, it can tie all sorts of strings to its pension package. But such a policy invites suspicion. And no company can afford to lay itself open to accusations of firing old employees to dodge pension obligations. Nor can the dissatisfied employee who stays on because he's sweating out his pension be considered an asset.

It may be years before a great number of the nation's businesses will get around to supporting pension plans. Many employers still are inclined to balk at costs which appear prohibitive and which bring them largely intangible benefits. But the pension idea *is* growing—and more and more employers are going to conform.

BY THOMAS DURRANCE. *Kiplinger Magazine,* February, 1948.

How to Improve Our Social Security Program

THERE are numerous areas in which our existing social security system might well be improved. Comment will be limited in this presentation, however, to some aspects of the old-age and survivors' insurance program, the unemployment compensation program, and proposals for compulsory cash temporary disability benefits.

There appears sound justification for the extension of the old-age and survivors' insurance program to employments not presently covered, such as agricultural labor and services performed for charitable, scientific, or educational organizations. It is better that individuals so employed be protected under a broad program to which they make direct financial contribution than cared for at public expense on relief rolls. The same may be said in respect to the self-employed.

As the result of acts of Congress authorizing the establishment and maintenance of special retirement programs for particular groups, there are approximately 25 special retirement programs in operation today. The situation existing in respect to all such special plans should be carefully reviewed. They should be either modified or repealed, and the employees subject to these programs should be brought within the scope of the general OASI program.

Other amendments to this program are advisable. For example, the qualifying age for women might well be reduced from 65 to 60. This is proper and desirable, for it is recognized that normally wives are from three to seven years younger than their husbands. The additional retirement allowance provided for the wife of a man who is 65 years of age should be payable at the age the wife will normally have attained when the husband has reached the age of 65. So far as single women are concerned, it is fairly well recognized that a woman 60 years old has usually reached the end of her working life. Private pension plans generally recognize this fact. Further, under the present program an individual receiving a retirement annuity is disqualified during any month in which $15 or more is received in wages from employment subject to the Social Security Act. As an encouragement to the acceptance of part-time work, a reasonable increase in this amount may well be justified.

Concerning unemployment compensation, the present financing arrangement is not sound. Briefly stated, present arrangements call for the submission of budgets by the state unemployment compensation agencies to the Federal Security Administration, and within Congressional appropriations, the granting to each state of a sum deemed by the federal agency to be sufficient for proper and efficient administration of the state law. We thus have one government expending funds that have been collected pursuant to taxes exacted by another.

It is fair to say that business generally supports the modification of present federal and state laws so that the states will collect through unemployment compensation taxes sufficient funds to pay both the unemployment benefits and the cost of administering the state program. This would be effected, not by the repeal of the Federal Unemployment Tax Act, but by providing a 100 per cent credit against the federal unemployment tax for state unemployment taxes paid rather than the present 90 per cent credit. The repeal of state unemployment compensation laws would not follow, for if any state legislature took such action the employers of that state would be re-

quired to pay the full 3 per cent federal unemployment tax. This proposal would provide a better basis for the operation and administration of the program and would eliminate to a substantial degree the difficulties and disagreements that, for the past 10 years, have been a source of irritation between the state and the federal governments. It should also simplify the present reporting and tax payment problems of employers.

In considering compulsory cash temporary disability benefits, it should be kept in mind that this type of program is not intended to meet the cost of hospitalization or medical care. Cash temporary disability benefits are weekly cash payments partially to replace the actual wage loss suffered by employees experiencing temporary disabilities of a non-occupational character. Existing programs of workmen's compensation provide for payments in the event of occupational accident or sickness. Cash temporary disability benefits serve a somewhat similar purpose in the event the accident or sickness is of a non-occupational character.

In any consideration of this problem, a determination must be made of the need of compulsory legislation. Between the years 1936 and 1946 the annual premiums for both group and individual policies providing weekly indemnity have risen from approximately $190,000,000 to over $700,000,000. This is not the full extent of the protection against this risk; there are hundreds of thousands of workers who are not insured but who are covered by private sickness benefit plans. According to a study made by the Conference Board, between 40 and 50 per cent of the workers covered by the New York Unemployment Compensation Law are covered by some private program of cash sickness benefits.

While it is recognized that a substantial number of employees undoubtedly do not have protection against this risk, this type of protection has been tremendously expanded during the past few years. Careful consideration should be given to the probability of further increases of a substantial character through voluntary effort before compulsory legislation is resorted to. In the event a case is made showing the need for compulsory legislation, it should take place in the states rather than in Congress. Two states have undertaken a compulsory system of cash temporary disability benefits—Rhode Island and California. The Rhode Island plan is a monopolistic state fund plan, financed by a direct tax on employees. Benefits from the fund are paid by the state to each disabled employee. The program has been in effect for approximately five years, and it is fairly well agreed that the results to date have not been satisfactory. The California plan is a modification of the Rhode Island program but, since it has only recently been inaugurated (benefits were first paid in December of 1946), little can be said as yet about its operation.

One type of program that has been considered is what might be termed a privately operated, publicly supervised program. Under such a program, employers are required to provide the mechanism through which their workers may receive at least the minimum benefits set forth in the law. No state tax is collected; no state fund is accumulated; and the state does not pay any benefits. The program is handled somewhat in the same fashion as workmen's compensation: the state has the responsibility of supervision.

Another type of plan that has been suggested is a modification of the privately operated, publicly supervised program. It is similar to it in practically all respects except that the state operates a competitive state insurance fund, charging a rate of premium consistent with the risk involved.

Neither of the latter two types of programs are in operation in any state, but proponents of these two plans urge that they have greater merit than either the Rhode Island or California type of program.

Each of these major social security problems presents a challenge that cannot be answered on the basis of prejudice or preconceived ideas. Each merits careful study. The right solution to these problems will benefit all our citizens; the wrong solution may threaten greatly our entire economy. The solution may or may not be compulsory legislation. Certainly if that course is to be avoided, it will be on the basis of full and complete knowledge of facts and their fair and sound analysis, resulting in a conclusion that the better answer is to be found in the following of some other course.

From an address by Harry G. Waltner, Jr. (Assistant to Manager, Insurance and Social Security Department, Standard Oil Co., N. J.) at the Cornell University Labor-Management Conference on Working Together in a Democratic Society.

On-the-Job Accidents in 1947

DESPITE some improvement in the general aspects of on-the-job safety, rising employment and the effects of two major disasters again pushed the total of disabling work injuries over the 2,000,000 mark in 1947. This was the seventh consecutive year in which disabling work injuries exceeded 2,000,000.

Preliminary estimates by the Bureau of Labor Statistics set the 1947 total of such injuries at 2,059,000, less than 1 per cent above the 1946 total of 2,056,000. In view of the expansion in industrial activities during the year, this may be regarded as an improvement.

The fatality record was less favorable. About 17,000 were killed in job accidents during 1947 as compared with 16,500 in 1946—a 3 per cent increase. This rise in fatalities resulted primarily from the Texas City explosion and the Centralia, Ill., mine disaster. In contrast, available information indicates a decline in permanent-partial impairments from 92,400 in 1946 to 90,000 in 1947.

Actual time lost in 1947 because of work injuries which occurred in that year is estimated at about 44,700,000 man-days, or the equivalent of a year's full-time employment for approximately 150,000 workers. This, however, represents only a part of the total production losses accruing from these injuries. If additional allowance is made for the future effects of the deaths and permanent physical impairments included in the 1947 total, the economic time loss chargeable to these injuries would amount to about 233,700,000 man-days, equivalent to a year's employment for 780,000 workers.

In addition to the 17,000 workers who died from work injuries in 1947, there were 1,800 who will be totally disabled the rest of their lives. And 90,000 others will have some more or less disabling impairment for the balance of their lives. The remainder of the total consisted of 1,950,000 injuries, each of which resulted in an inability to work lasting at least one full day after the day of injury, but without permanent ill effects.

In manufacturing, the increase in work injuries normally associated with rising employment did not occur. The 1947 injury total for the manufacturing group was practically unchanged from 1946—539,000 disabling injuries in 1947, as compared with 541,500 in 1946.

—*Labor Information Bulletin* 3/48

Survey of Books for Executives

PLANNING THE PRODUCT. By D. M. Phelps. Richard D. Irwin, Inc., Chicago, 1947. 292 pages. $4.50.

*Reviewed by Donald R. G. Cowan**

This eight-chapter book by Professor Phelps deals with one of the most vital phases of business management. Ever since goods came to be produced in anticipation of demand, corporation executives have wrestled with the problems connected with the general question of what will sell. Whether firms have waxed or waned has depended to a large extent on their success in handling this problem.

Keenness of competition has accented the successes and failures in meeting these problems. Because of this, a body of principles and practices relating to product planning are becoming established. In this scholarly work, Professor Phelps has made an excellent contribution in describing the varied principles and practices that have evolved, and in providing many concrete illustrations from the experiences of leading corporations.

In the introduction, the author tells how consumers have shifted to manufacturers the responsibility for anticipating their wants and for designing products to satisfy them. Chapter II points out that product development is larger than improvement of established products, treats the general and specific reasons for product development, sources of ideas and procedures. Chapter III discusses the complex problem of setting up a line of products, the economies to be gained or lost in production and distribution, wide and narrow lines, and the like. Chapter IV describes product and market testing, including internal, laboratory, and consumer testing, pre-testing and post-testing. Chapter V covers the complex subject of brands and trade-marks, including the objectives and problems in branding, competition with distributors' brands, registration, and legislation. Chapter VI discusses packaging under such topics as its objectives, promotional advantages, relation to cost, new packaging procedures, and legislation. Chapter VII describes the recent new emphasis on labelling, the manufacturers' attitudes and problems, and the benefits from effective labelling. Chapter VIII covers the important twin topics, warranty and service policies, indicating the consumers' requirements, the manufacturers' obligations, and importance of effective internal administration.

The author's treatment of the many phases of product planning exhibits a fine balancing of their importance. For example, in describing the use of test markets before giving general distribution to a product (pp. 102-106), the importance of simulating the entire market is indicated. The difficulty encountered in specific instances in attempting to meet the requirements of representativeness under changing regional business conditions could have been described at considerable length. But similar elaboration of other phases of product planning might have resulted in a volume twice as large.

By definition, the author's approach is restricted to that of the manufacturer of goods. The discussion of service policies, for example, applies to those services which have been associated with selling manufacturers' goods. Nevertheless service institutions would benefit from a reading of this book because they often need service planning. Banks and hospitals depend entirely on the acceptance and sale of their services, while distributive organizations such as department stores, chain stores, and mail order houses succeed partly because of the services they associate with their sale of goods. Their patrons may be highly influenced by the installation of lights, escalators, and other "free" conveniences. Changes in a store's policies relating to the alteration of goods or a bank's policies governing the extending of loans or the handling of trusts and estates deserve the most careful pretesting and planning. Especially because charges are usually made for these services, many of the principles, practices, and testing methods described by Professor Phelps may be adapted to use by service organizations.

The author's organization is logical and methodical, and his style is lucid. There are very few percentages to tax the reader's imagination and no tables or charts. Each chapter is fortified with authoritative footnotes and adequate references to supplementary sources of information. The absence of a summation suggests that the author contemplates writing further on related subjects in the broad field of market and sales management.

Product planning is a very important consideration in the profitable utilization of to-

* Donald R. G. Cowan and Associates, Cleveland.

morrow's plant facilities and sales organizations. The avoidance of possible pitfalls especially in a buyers' market makes an early reading of this book both a stimulating and beneficial undertaking for all executives concerned with the successful development and selling of manufactured products.

ANNUAL REPORTS TO STOCKHOLDERS. By N. Loyall McLaren. Ronald Press Company, New York, 1947. 364 pages. $5.00.

*Reviewed by Franzy Eakin**

The avowed purpose of this book "is to kill two birds with one tome—the reader and the writer of annual reports." The audience selected is "the boards of directors and financial officers" who "look upon the annual report to stockholders as a nuisance to be disposed of as quickly as possible at the year end."

The foregoing quotations from the preface may convey too limited a view of the writer's purposes and audience. The purposes are threefold: (1) To state clearly in layman's language the meaning of many technical terms—e.g., accruals, earned surplus; (2) to determine adequate or deficient reporting techniques from examination of 64 annual reports covering fiscal years ended in 1945; and (3) to suggest a means of establishing reporting standards "which will enable the discerning reader to analyze the financial position of a company and to form a considered opinion of the potential worth of its securities. . . ." (p. 329)

The author would seem to have aimed his "tome" at a selected group of leaders, for the means he recommends to establish the desired reporting standards is thus described:

> A joint committee should be appointed, comprised of representatives of the national accounting bodies, the United States Chamber of Commerce and the National Association of Manufacturers, the several associations of bankers and credit men, the New York Stock Exchange, the American Management Association, and all other representative non-governmental groups having a direct interest in the improvement of financial reporting techniques. Doubtless such a project would be sponsored and financed by one of the great foundations dedicated to the betterment of our economy. (pp. 326-327)

The book opens with two short chapters concerning early annual reports and development of the accounting profession. The next two chapters provide concise and clear statements of the fundamentals of accounting and double-entry bookkeeping. These four chapters establish a sound frame for the structure which follows.

* Vice President, A. E. Staley Manufacturing Co., Decatur, Ill.

The three fundamental statements of accounting—the balance sheet, the profit and loss statement, and the analysis of surplus—are the subjects of the next dozen chapters. All accounts which appear in these statements are defined in non-technical language and illustrated by examples selected from the 64 annual reports on which the study is based.

Three chapters are devoted to discussion of consolidated statements, footnotes to financial statements, and the auditors' certificate or opinion. Two chapters discuss the formal arrangements and texts of annual reports, as exemplified by the reports under consideration.

The final three chapters are titled "Financial Statement Analysis," "Functions of the Board of Directors," and "Reporting Standards." The book concludes with a glossary of accounting terms and a comprehensive index (24 pages).

Since the 64 firms whose annual reports form the basis of this study (39 manufacturers, six oil producers, five railroads, four light and power companies, three communication companies, three mining enterprises, two retailers, one service company, and one motor carrier) represent a reasonably complete cross-section of contemporary reporting practices, the author's conclusions indicate the value of this study to management desirous of presenting interesting, factual, and constructive reports of business operations:

> . . . the failure of management and public accountants to agree within reasonable limits upon uniform accounting procedures creates an entirely unnecessary state of confusion in the minds of report readers.
>
> Manifestly, some companies attempt to tune the report to the wave length of the class of stockholders who cannot be expected to have any familiarity with the basic principles of financial accounting. It is to be doubted, however, whether pretty pictures, little mannequins in rows or dollars in piles, and one-syllable words will dispel the bewilderment of the casual analyst who has occasion to review several annual reports and finds that the caption describing an item of essentially the same signification differs in each case.
>
> The writer is keenly aware of the noteworthy contribution toward better reporting techniques made by individual companies that have recognized the need for a clearer understanding by the public of the "modus operandi" of competitive capitalism.
>
> Deficiencies in the reports of any large company may have an unfortunate impact upon industry in general as well as upon the individual enterprise. It is significant that efforts of social reformers to discredit free enterprise through the distortion of inconclusive statements in annual reports, and through emphasis upon the shortcomings of some reports, have been particularly pronounced since the close of the war.
>
> . . . numerous discrepancies . . . can be brought into agreement without harm to anyone.
>
> . . . first the variances in terminology employed to describe individual items in the financial statements. Here personal whim should give way

to reasonable conformity with generally accepted conventions.

Another aspect of financial accounting in which failure to observe accepted principles leads only to confusion in the public mind and serves no constructive purpose concerns the arrangement of items within the financial statements.

A third deficiency of major importance is the failure of most large companies to supply adequate information with respect to the nature and disposition of reserves.

A fourth weakness in contemporary financial accounting lies in the failure of public accountants and financial officers to agree upon criteria governing entries in the income statement and in the surplus statement.

A fifth shortcoming of the day is found in the want of authoritative standards governing the submission of comparative financial statements in published reports.

Finally, it is suggested that an application of funds statement (with a more appropriate title) be included in all annual reports of quasi-public companies.

But, after all, clear and complete disclosure of significant financial information, which will enable the discerning reader to analyze the financial position of a company and to form a considered opinion of the potential worth of its securities, must always be the first obligation of the board of directors in accounting for its stewardship.

A careful student of accounting and financial reporting can derive much benefit from this study. However, few directors and officials are likely to give it sufficient consideration to either be "killed" by the "tome" or to improve their reports. This reviewer doubts that the recommended cooperative movement to develop reporting standards will be seriously considered by any of the groups who should participate in this action.

TIME STUDY AND COMMON SENSE. By Abraham Cohen. MacDonald & Evans, London, England, 1947. 112 pages. 10/.

*Reviewed by G. J. Stegemerten**

No doubt about it, Mr. Cohen establishes himself as a critic of existing procedures. While reading this book, however, one wishes that he would offer effective substitutes or suggestions for that which he condemns.

He has apparently made a wide study of time-study procedures and the problems arising in this work. His criticism is thought-provoking and will no doubt lead to further consideration of the procedures advanced by the authors of the writings to which he refers.

In a way, the book is unique in its approach to the subject of time standard determination. The author analyzes the faults which he believes to be inherent in many accepted procedures for recording and selecting elemental time values, the rating of operator performance, and application of fatigue allowances. Extensive quotations from recognized treatises on these subjects are used to illustrate the author's contentions that current practices are both illogical and inconsistent. He then winds up his critique by admitting that the techniques employed today are better than none at all.

Mr. Cohen advocates greater use of judgment and better training for time-study men as a substitute for element selection, leveling, and allowance procedures based upon mathematical formulas.

The book is recommended to all who are interested in a presentation of the weaknesses which are found in today's methods of setting production standards, though the reader may not agree with all that Mr. Cohen says.

* General Manager, Methods Engineering Council, Pittsburgh, Penna.

GETTING RESULTS FROM SUGGESTION PLANS. By Herman W. Seinwerth. McGraw-Hill Book Company, Inc., New York, 1948. 223 pages. $3.00.

*Reviewed by Charles C. Gibbons**

No one could have written this handbook except a man with Mr. Seinwerth's extensive experience with suggestion systems. Mr. Seinwerth has been manager of Swift & Company's suggestion plan department and president of the National Association of Suggestion Systems. Every major problem related to the administration of a suggestion system is covered in this book.

The Introduction deals with the history of suggestion systems and the benefits of a suggestion system for both company and employees. Those who regard the suggestion system as a new development in personnel work will be interested to learn of the companies that have operated formal suggestion plans for more than 50 years.

There are 10 short chapters on policies and procedures which cover such topics as eligibility, awards, the functions of the suggestion committee, and methods of investigating suggestions. Those who are thoroughly familiar with the operation of a suggestion system may find nothing new in these chapters. One interested in starting a suggestion system, however, will find this material valuable.

The author reports a survey of 70 suggestion plans made in 1945 by the National Association of Suggestion Systems. For each 100 employees, the average company received 21 suggestions annually of which 26 per cent were adopted. The average award paid for adopted suggestions was $21.06.

The last 70 pages of the book are devoted to a description and analysis of the suggestion systems of 11 companies. In each case the following points are covered: the history

* The W. E. Upjohn Institute for Community Research, Kalamazoo, Michigan.

of the suggestion plan, policies, procedures, promotional methods and results.

The results reported will convince the skeptical of the tangible benefits to be derived from a well-run suggestion system.

PATTERN FOR GOOD LABOR RELATIONS. By Lee H. Hill. McGraw-Hill Book Company, Inc., New York, 1947. 233 pages. $3.00.

*Reviewed by W. J. Reilly**

Pattern for Good Labor Relations provides an excellent survey of industry's various programs for the improvement of employee relations, and reviews the techniques for administering these programs.

Mr. Hill lays the groundwork for his pattern for sound labor relations by pointing out the basic fact that labor relations, which deals with the handling of management-union problems, is only one segment of the far broader problem of relations with the employees who are represented by unions. Having made this distinction between labor relations and employee relations, the author capably analyzes tested methods that management should find effective in the development of satisfactory relations with employees.

In approaching the problem, Mr. Hill critically examines the "wants" of the individual worker and assigns to each its proper place in the employee relations picture. He tells us, for example, that security, fair adjustment of grievances, and proper working conditions are the major "wants" of employees, with wages a poor fourth in order; other such commonly mentioned "wants" as promotion, share with management in profits, job planning, and self-expression are secondary to these. The author succeeds in dispelling much of the folklore which surrounds industrial relations.

Mr. Hill discusses many of the problems which management meets in establishing company policy and in bringing such policy to bear in the shop. His treatment of the technique of reducing policy statements to language which will be readily understood by the employee and which will "sell" the policy to the rank and file is probably the best thing in the book.

The author's handling of controversial issues is thought-provoking, particularly when evaluated in the light of the diversity of opinion which exists on the subjects. For example, Mr. Hill maintains that the joining of a recognized union by a new employee is an indication of unsatisfactory employee relations. There are many experts in the field of employee relations, however, who would not accept this conclusion as the logical one in every case. Some would feel that the joining of a union, where it is recognized as the bargaining agent for a large production group, is not to be regarded as indicative conduct on the part of a new worker.

In his discussion of organizational techniques, the author indicates that, in administering company policy, the labor relations staff should attempt to persuade the line organization to accept the advice of the labor relations department and, failing to persuade, should possess and exercise the authority to order the line organization to follow such advice. Many labor relations executives would feel that use of such authority would so antagonize those responsible for policy application that it would, in the long run, operate to the detriment of the labor relations staff itself.

Mr. Hill also advises management to be cautious of the use of legal talent in drafting collective bargaining agreements and in defending the company's position in arbitration. He states that the legal approach does not give consideration to the exceptions to the rule that will take the human element into account. Many would say that Mr. Hill has failed to draw the necessary distinction between the broad programs which are developed, in which should be incorporated the policy of making exceptions to the rule, and the specific contract policies which must be administered accurately and consistently in order to minimize the possibility of unsound precedent and warranted charges of discrimination.

*Manager, Labor Relations, International Harvester Company.

BRIEFER BOOK NOTES

[Please order books directly from publishers]

A MANUAL FOR ADMINISTRATIVE ANALYSTS. By John M. Pfiffner and S. Owen Lane. School of Public Administration, University of Southern California, University Park, Los Angeles, 1947. 86 pages. $2.50 (address orders to University Bookstore). Here is an invaluable handbook for those responsible for reviewing and improving procedures, methods, and organization structures. It provides a tentative job analysis of the

duties, responsibilities, and techniques of investigative procedure required of the administrative analyst; it outlines the principal types of surveys with which the analyst may be confronted, and sets forth the step-by-step sequence to be pursued in specific surveys. The types of surveys covered include organization surveys, work simplification surveys, space-layout surveys, surveys of machines and equipment, form analysis surveys, development of procedural manuals surveys, surveys of requests for additional personnel, position classification surveys, wage and salary surveys, and budget analyses surveys. This manual is a "must" for any business executive who desires to keep a thorough check on his organization.

PRACTICAL RULES FOR GRAPHIC PRESENTATION OF BUSINESS STATISTICS. By L. E. Smart and S. Arnold. Bureau of Business Research, Ohio State University, Columbus, Ohio, 1947. 89 pages. $2.00. Clearly and concisely presents the essential rules for construction of the most widely used types of business charts. The rules are set forth in outline form, with a minimum of textual discussion. The authors make no attempt to cite alternative practices, but offer basic instructions for chart-making in accordance with generally accepted standards.

GOOD LIGHTING FOR PEOPLE AT WORK IN READING ROOMS AND OFFICES. By Alfred H. Holway and Dorothea Jameson. Division of Research, Harvard Business School, Soldiers Field, Boston 63, Mass., 1947. 43 pages. 75 cents. Reports the results of a research investigation of what constitutes "good lighting" for reading purposes. The findings will be of interest to administrators confronted with the need for improved lighting in offices, libraries, or other rooms where reading is to be done.

COMPENSATING THE SALES FORCE. *Report No. 566,* The Dartnell Corporation, Chicago. 64 pages, plus tables and illustrations; loose-leaf. $7.50. Reviews present practices of more than 300 companies, in varied lines, in compensating members of their sales force. The first part of the study discusses levels of earnings; the second section, methods of payment. The material presented will offer a convenient check of any one company's policies against the national average. Descriptions of individual plans may offer adaptable ideas to executives considering revamping of their companies' pay plans.

MODERN PACKAGING ENCYCLOPEDIA: 1948. Packaging Catalog Corporation, 122 East 42nd Street, New York 17, N. Y. 1,206 pages (plus charts and inserts). $6.50. An indispensable reference work for manufacturers, merchandisers, and shippers. More than 60 per cent of the 1948 Encyclopedia is entirely new; all other standard information has been brought up to date. Larger than any of its 18 predecessors, the book contains about 670 pages of editorial material, a Buyers' Guide of 90 pages, and includes 452 advertisers. Major sections cover recent trends in packaging, package planning fundamentals, materials, package forms, production, shipping, and display. A gallery of case histories is featured.

CASE STUDIES IN AUDITING PROCEDURE: *Number 1.* American Institute of Accountants, 13 East 41st St., New York 17, N. Y., September, 1947. 32 pages. 50 cents. This is the first of a series of case studies prepared by individual members of the Committee on Auditing Procedure of the American Institute of Accountants to illustrate actual application of auditing procedures. It describes the auditing procedures followed in the case of a loading and hauling equipment manufacturer.

CASE STUDIES IN AUDITING PROCEDURE: *Number 2.* American Institute of Accountants, 13 East 41st St., New York 17, N. Y., October, 1947. 34 pages. 50 cents. In this case study prepared by the Committee on Auditing Procedure of the AIA, the actual audit of a newspaper publisher by a member of the committee is detailed.

AN EXPLANATION OF THE FEDERAL OLD AGE BENEFIT SYSTEM. Industrial Equities, Inc., 141 West Jackson Blvd., Chicago, Ill., 1947. 32 pages. 15 cents. An outline of the individual and family benefits under the Federal Old Age Benefit System, addressed to rank-and-file employees. Includes a section of questions frequently asked, with the answers.

IMPROVEMENT IN METHODS TO EFFECT LOWER DISTRIBUTION COST. Proceedings of the 27th Controllers' Congress Convention, held in June, 1947. National Retail Dry Goods Association, 100 West 31st St., New York 1, N. Y. 176 pages. $5.00. The scope of this yearbook is indicated by the following section titles: Political, Social and Economic Trends in Retailing; New Approach to Expense Control; Work Simplification and Improved Methods of Productivity; Methods of Compensation and the Work Week; Small Store Problems; Settlement of Insurance Losses.

NOMA PROCEEDINGS—1947. National Office Management Association, 2118 Lincoln-Liberty Building, Philadelphia 7, Penna. 144 pages. $5.00. These proceedings of

NOMA's last annual conference include papers on the scheduling of office work, testing office procedures, standard practice manuals, office layout, research and work simplification, motivating clerical employees, and the selection and development of personnel.

WHERE TO EAT. The Dartnell Corporation, Chicago, Ill., 1947. Pocket size, 270 pages. $1.00. Subtitled "2,300 Restaurants Preferred by Businessmen," this handy little directory was compiled from the lists of 700 executives. Recommended to salesmen and others who travel.

BEST'S SAFETY DIRECTORY. Alfred M. Best Company, Inc., New York, 1947. 494 pages. $5.00. The second annual edition of this directory contains concise information on many hundreds of recognized safety, first-aid, sanitation, and fire-protective products and devices. The listings include an illustration and description of the device plus the names and addresses of the manufacturers; the use of each device or the hazard it is designed to overcome is also indicated. Of interest to management executives who are directly or indirectly concerned with the purchase and use of safety and allied equipment.

MARKET AND MARKETING ANALYSIS. By Myron S. Heidingsfield and Albert B. Blankenship. Henry Holt and Company, New York, 1947. 335 pages. $3.00. An excellent textbook for beginning students in marketing research, and for business men without a specialized background in commercial research. In describing methods for getting answers to the many marketing problems which beset the manufacturer, the wholesaler, and the retailer, the authors evaluate alternative techniques and discuss situations in which each technique may be best applied.

READINGS IN INDUSTRIAL RELATIONS AND PERSONNEL MANAGEMENT. By Herman Feldman. The Dartmouth Printing Co., Hanover, N. H., 1947. 272 pages. $3.50. The work of the late Professor of Industrial Relations at the Amos Tuck School of Business Administration, this compilation consists of 14 chapters by the author, and the rest taken from other sources. Among the subjects of which it treats are: scientific aspects of hours of work; reducing accidents; keeping the older employee at work; the annual wage; administering wage incentives; introducing job changes; conducting labor negotiations; rating employee performance.

MODERN MAN—SLAVE OR SOVEREIGN?: *Report of Annual Forum, New York Herald Tribune, 1947.* New York Herald Tribune, Inc., New York. 248 pages. $1.50. This symposium features addresses on "America's Problems of Liberty," "Spiritual Contributions to the Strength of Man," "The Force of Free Economy," and "The Reconstruction of Europe."

INDUSTRY TUBERCULOSIS, SILICOSIS AND COMPENSATION: *A Symposium.* National Tuberculosis Association, New York. 126 pages. $2.00. Current papers for physicians and administrators interested in industrial medicine and in the medico-legal and human relations aspects of workmen's compensation.

PROCEEDINGS OF A CONFERENCE ON INDUSTRIAL OPHTHALMOLOGY. Sponsored by the Columbia University College of Physicians and Surgeons in cooperation with the National Society for the Prevention of Blindness. Columbia University Press, New York, 1947. 291 pages. $3.00. Features papers on eyesight in industry, fundamentals of seeing, good industrial lighting, determining visual skills, job analysis, industrial hazards and safeguards, visual screening methods, color vision testing, and color in the plant.

PERSONNEL PROCEDURES IN AUSTRALIA. The Institute of Industrial Management, 136-138 Queen Street, Melbourne, Australia, 1947. 100 pages. A report of a survey of personnel policies and practices adopted by companies "down under." Evaluates the efficacy of Australian practices in the light of up-to-date developments and delineates the processes and practices considered most appropriate to personnel work in Australia.

JOBS FOR WOMEN OVER 35. By Julietta K. Arthur. Prentice-Hall, Inc., New York, 1947. 253 pages. $3.50. Here is a unique guidebook which tells mature women numerous ways to solve their livelihood problems. Mrs. Arthur shows that age need not be an occupational handicap, that there are hundreds of employment opportunities for women over 35 who are compelled to earn a livelihood for the first time or who, because of industrial age, are cast out of their former occupations.

APPRENTICESHIP PRACTICE IN THE UNITED STATES. By Eugene Danaher. Graduate School of Business, Stanford University, California, 1947. 60 pages. 75 cents. This analysis of apprenticeship programs in American industry outlines the general provisions of apprenticeship agreements and the customary procedures of devising

and putting these agreements into operation; and it lists the principal public and private agencies of apprenticeship promotion.

EMPLOYEE PICNICS. Industrial Recreation Association for American Industry, 1 North La Salle Street, Chicago 2, Ill., 1947. 32 pages. $1.00. Based on the combined experience of member companies of the Industrial Recreation Association, this helpful guide details the various steps in planning and conducting a successful employee picnic or outing. Features a checklist for program inspiration.

INDUSTRIAL RELATIONS: *The Road Ahead!* A summary of the twenty-eighth Annual Conference on Human Relations in Industry, Blue Ridge, N. C., 1947 (address E. G. Wilson, 618 Walton Bldg., Atlanta, Ga.). 140 pages. These conference papers discuss many of the factors which will affect industrial relations in the immediate future. Among the subjects covered are: "Better Understanding of People as a Guide to Management in Dealing with Human Relations," "Better Industrial Relations Through Better Managerial Organization," "Trends in Communicating with Employees," "Measuring and Showing the Results of Good Personnel Administration," "Indoctrination of New Employees," "The Responsibility and Relationships of Supervisors in an Industrial Organization," and "The New National Labor Policy."

MARKETING RESEARCH AND INDUSTRY. National Association of Manufacturers, 14 West 49th Street, New York 20, N. Y., 1947. 32 pages plus appendix. Gratis. A report of a survey sponsored by NAM and compiled by the Marketing Research Activities Committee of the American Marketing Association. The findings, which will be of considerable significance to sales and marketing executives, cover: the conduct of marketing research; marketing research functions; size and organization of marketing research operation; expenditures; and the future of marketing research. A number of observations and recommendations are made by the committee.

OPERATING UNDER THE TAFT-HARTLEY ACT. By Max Malin and S. Herbert Unterberger. Labor Relations Information Bureau, 918 F Street, N. W., Washington 4, D. C., 1947. 52 pages. $1.50 (quantity prices on request). Employing a convenient functional arrangement of subject matter, this brief handbook shows how the Taft-Hartley Act applies in frequently occurring labor relations situations. This material will prove most helpful to industrial relations practitioners, to arbitrators and conciliators, and to teachers whose labor relations textbooks have in part been made obsolete by passage of the Act.

BUSINESS ORGANIZATION. Policyholders Service Bureau, Metropolitan Life Insurance Company, New York, 1947. 52 pages. Issued to Metropolitan Group policyholders; limited supply available to fill requests of other executives. A study of the principles and patterns of business organization. Presents analyses of the organization of 27 representative companies. Recommended to the executive who wishes to reorganize his own organization.

HOUSE MAGAZINE LAYOUT: *Format, Design and Typography.* By K. C. Pratt. The Champion Paper and Fibre Company, Hamilton, Ohio, 1947. 42 pages. Shows industrial editors not only how to avoid the hazards of bad make-up in company publications but also how to enhance the quality of their products.

SUPERVISORY PROGRESS THROUGH ASSOCIATION. Proceedings of the second annual conference of the Greater Portland Management Club, Portland, Ore., 1947. 105 pages. $2.50. Features panel sessions on "Putting Ideas Across," "Current Labor Legislation and the Supervisor," "Overhead—What Is It and How Can It Be Controlled?", "Job Evaluation," "Current Supervisory Problems—How to Solve Them."

BETTER RELATIONS THROUGH BETTER UNDERSTANDING. Proceedings of the twenty-ninth Silver Bay Conference on Human Relations in Industry. Edited by E. Clark Worman. Association Press, 347 Madison Avenue, New York, 1947. 181 pages. $1.50. In addition to several papers on the promotion of better understanding among management, labor, and the public, and within the management group, these conference proceedings include addresses on: the future of labor relations; line and staff functions; evaluating personnel work; merit rating; formulating and following through on company policy; selection of foremen; preparing for arbitration; labor-management cooperation; and implications of the Taft-Hartley Law.